



Government of Bengal

Public Health Department

Bengal Public Health Report

By

Dr. R. B. Khambata, D.P.H.

Director of Public Health, Bengal (offg.)

Reports of the
Bengal Sanitary Board and
the Chief Engineer
Public Health Department

For the Year 1930

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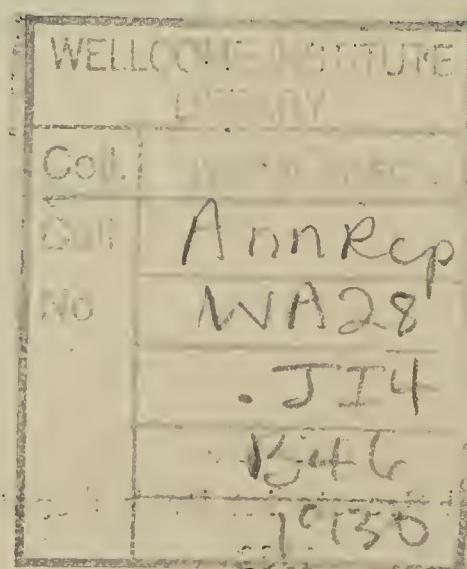
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Bengal Public Health Department.

Part I

Sixty-Third Annual Report of the Director of Public Health, Bengal, 1930.

SECTION I.

Meteorology.

The following brief account of the rainfall over Bengal during the period May to October 1930 has been furnished by the Meteorologist.

The total rainfall of May was in slight defect in the Rajshahi and Burdwan Divisions and roughly normal elsewhere. In June, while roughly normal elsewhere, it was slightly defective in the Presidency and Burdwan Divisions. In July, it was in slight to moderate defect in the Rajshahi Division, in slight to moderate excess in the Presidency, Burdwan and Dacca Divisions and roughly normal in the Chittagong Division. In August, there was slight excess in the Presidency Division, slight defect in the Chittagong Division, but it was roughly normal elsewhere. In September, it was in slight defect in the Presidency, Rajshahi, Dacca and Chittagong Divisions and normal in the Burdwan Division. In October, while slight defects were registered in the Rajshahi, Dacca and Chittagong Divisions, it was in moderate to considerable defect in the Presidency and Burdwan Divisions. The following table shows the departure of actual rainfall expressed as a percentage of the normal fall:—

Departure expressed as a percentage of the normal fall.

Divisions.	May.	June.	July.	August.	Sep-tember.	October.	Monsoon season, 1930.
Presidency ..	-14	-17	+47	+22	-33	-54	0
Burdwan ..	-34	-31	+48	-7	-7	-70	-6
Rajshahi ..	-20	+3	-20	+5	-26	-25	-11
Dacca ..	-15	+7	+23	0	-34	-36	-4
Chittagong ..	+14	+5	+5	-24	-35	-24	-9

SECTIONS II TO IV.—No longer dealt with in this report.

SECTION V.

Vital Statistics.

2. The Provincial Birth and Death-rates.—Calculated on the census of 1921, the provincial birth-rate for 1930, 26·6 per mille and the death-rate 22·4 were less by 9·2 and 4·7 per cent. when compared with those of the previous year. Against the quinquennial average of 28·7 and 24·8 per mille respectively, they showed a reduction of 7·3 and 9·7 per cent. Thus both the birth and death-rates were the lowest on record since 1900.

3. Comparison of Bengal vital statistics with those of the other provinces.

Provinces.	Birth rate per mille of population for the year 1930.	Death rate per mille of population for the year 1930.	Rates of natural increase + or decrease — per mille 1930.	Infant mortality rates per mille cal- culated on the number of births regis- tered during the year 1930.		
				Male.	Female.	Total.
Bengal Presidency	26·60	22·44	+4·16	192·91	181·23	187·30
Madras Presidency	39·83	25·52	+14·31	195·93	174·93	185·68
Bombay Presidency	37·41	29·53	+7·88	194·78	178·89	187·14
United Provinces	37·31	27·20	+10·11	177·07	163·74	170·79
Punjab ..	43·26	29·66	+13·60	189·14	181·90	185·73
Central Provinces ..	47·74	37·76	+9·98	259·61	223·06	241·82
Bihar and Orissa ..	36·2	29·6	+6·6	148·3	126·9	137·8
North-west Frontier Province ..	25·60	21·89	+3·71	149·14	143·16	146·54
Burma ..	28·87	20·82	+8·05	211·67	192·35	202·26
Assam ..	31·35	21·40	+9·95	182·66	165·75	174·44

The above statement shows that the birth-rate in Bengal was lower than that of every other province except the North-West Frontier Province, and the death-rate higher than the North-West Frontier Province, Assam and Burma only. The rate of natural increase was 4·2 compared with 5·8 per mille in 1929 showing no extraordinary variation to disturb the steady healthy increase in population maintained in Bengal for a number of years past. Its infant mortality rate was lower than that in the Central Provinces and Burma but higher than in the others.

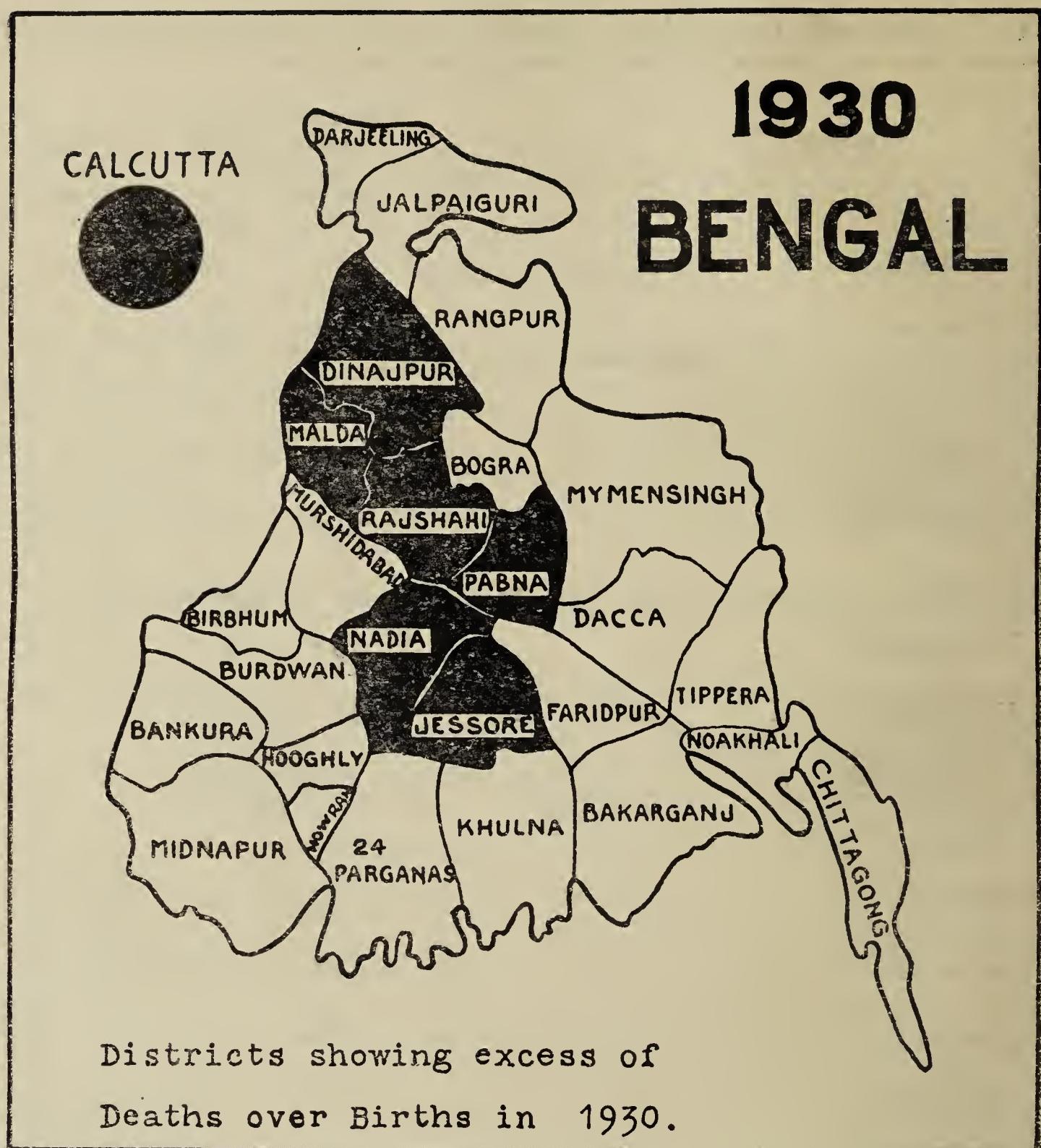
4. Natural increase of population in Bengal.—There was an increase of 193,675 births over deaths in the province in 1930, compared with 267,015 in the previous year. With the exception of seven districts

noted below, all the others shared in this increase in varying proportions as shown in the following statement:—

Districts.	Rates of natural in- crease in districts per mille.		Increase + or decrease—.
	1929.	1930.	
Noakhali	+14·3 +14·1 —
Birbhum	+16·0 +12·5 —
Chittagong	+8·0 +9·4 +
Bakarganj	+11·9 +9·0 —
Mymensingh	+7·2 +7·8 +
Tippera	+8·4 +7·7 —
24-Parganas	+9·2 +7·5 —
Midnapur	+11·4 +6·9 —
Murshidabad	+15·6 +6·6 —
Bogra	+5·8 +6·5 +
Khulna	+5·8 +6·3 +
Jalpaiguri	+6·8 +5·8 —
Dacca	+5·6 +5·6 ±
Bankura	+10·7 +5·1 —
Darjeeling	+4·5 +4·1 —
Howrah	+5·1 +3·6 —
Hooghly	+5·4 +3·5 —
Rangpur	+3·5 +2·1 —
Faridpur	+1·7 +1·9 +
Burdwan	+7·2 +1·7 —

In Chittagong, Mymensingh, Bogra, Khulna and Faridpur, the increase during 1930 was higher than that in 1929, in Dacca it was equal while in the other districts it was less.

Of the remaining seven districts that registered an excess of deaths over births in 1930, six are those that showed this peculiarity in the previous year as well; the seventh Malda is a fresh addition. Jessore and Calcutta appear to have improved, while in others obviously there are signs of increased deterioration.



Excess of deaths over births.

Districts.	1929.			1930.		
	Birth rates per mille.	Death rates per mille.	Excess of deaths over births per mille.	Birth rates per mille.	Death rates per mille.	Excess of deaths over births per mille.
Jessore ..	23·2	33·0	9·8	19·5	27·0	7·5
Calcutta ..	21·1	30·6	9·5	21·5	28·9	7·4
Nadia ..	32·7	33·3	0·6	27·2	32·8	5·6
Malda ..	32·7	28·6	..	27·5	32·2	4·7
Rajshahi ..	31·7	33·1	1·4	26·6	30·7	4·1
Pabna ..	24·8	25·7	0·9	22·5	25·5	3·0
Dinajpur ..	28·0	28·3	0·3	27·1	27·9	0·8

5. Decadent Areas.—Nine districts showed improvement in their decadent areas in 1930 compared with the previous year, 14 a retrogression, while 2 others showed no change. In Noakhali district alone there was no such area. The worst decadence in 1930 was noted in Malda, Rajshahi, Pabna, Dinajpur and Rangpur districts of the Rajshahi Division, Faridpur district of the Dacca Division, Burdwan and Hooghly districts of the Burdwan Division and Jessore and Nadia in the Presidency Division.

Decadent Areas in Bengal.

Districts.	Total decadent area in square miles.		Percentage of districts.		Improve- ment + or retro- gression —.
	1929.	1930.	1929.	1930.	
Burdwan Division—					
Burdwan	408	815	15·1	30·1	—
Birbhum	4	..	.2	..	+
Bankura	108	330	4·1	12·6	—
Midnapur	150	210	3·0	4·1	—
Hooghly	270	275	22·7	23·1	—
Howrah	9	9	1·7	1·7	±
Presidency Division—					
24-Parganas	41	207	.8	4·3	—
Nadia	1,686	1,623	60·7	58·4	+
Murshidabad	6	485	.3	22·9	—
Jessore	2,697	2,606	92·9	89·7	+
Khulna	517	105	10·9	2·2	+
Rajshahi Division—					
Rajshahi	1,504	1,987	57·4	75·8	—
Dinajpur	2,015	2,457	51·1	62·3	—
Jalpaiguri	412	164	14·1	5·6	+
Darjeeling	254	254	21·8	21·8	±
Rangpur	505	1,474	14·4	42·1	—
Bogra	5	4	.4	.3	+
Pabna	841	1,118	50·1	66·6	—
Malda	509	1,544	27·8	84·2	—
Dacca Division—					
Dacca .. ..	..	291	..	10·7	—
Mymensingh	214	3	3·4	.05	+
Faridpur	861	919	36·3	38·7	—
Bakarganj	1	7	.03	.2	—
Chittagong Division—					
Chittagong	103	..	4·1	..	+
Noakhali .. ..	..	..	..	..	..
Tippera	3	..	.1	..	+

6. Registration and Verification of Vital Occurrences.—The new system under which the Presidents of Union Boards in a majority of registering circles have been entrusted with the duties of registration of births and deaths, is still working very unsatisfactorily, and the monthly vital statistical returns are received in my office even three or four months after the date on which they become due. It is expected, however, that in course of time when the Presidents have learned better to realise their responsibilities in the matter, the existing defects and delays are sure to be removed. But the worst offenders in this respect are the station masters. Up to the end of the year 1926 the vital statistics in rural areas within railway limits were collected by the station masters under executive orders. When the Bengal Births and Deaths Registration Act, 1873, was extended to all rural areas in Bengal, this arrangement was continued. In railway areas which lie within municipal limits, births and deaths are registered by the municipalities concerned. An examination of the vital statistical returns of the rural areas within the railway limits, since the application to them of the above-mentioned Act, shows that this duty, as a whole, has been performed very perfunctorily and with the exception of a few, in the majority of instances, the number of births and deaths recorded bear no proportion to the local population. The subjoined statement showing the railway vital statistics for the year 1930 is an instance of such detection and unless this state of affairs is remedied, some other alternative method of collecting these statistics will have seriously to be considered.

Births and Deaths within railway limits during the year 1930.

Districts.	Births.	Still birth.	Deaths.									All causes.
			Cholera.	Small-pox.	Fever.	Dysentery	Diarrhoea.	Respiratory diseases.	Injuries.	Other causes.		
1	2	3	4	5	6	7	8	9	10	11	12	
Burdwan	..	1	..	..	..	..	..	..	..	..	..	.. 9
Birbhum	..	8	..	..	..	..	..	..	..	..	..	.. 9
Bankura	..											
Midnapur	..	685	..	20	2	232	32	19	149	23	226	703
Hooghly	..	2	..	..	..	..	..	..	..	..	..	.. 3
Howrah	..	17	..	2	..	..	..	..	..	..	..	.. 41
24-Parganas	..											
Nadia	..											
Murshidabad	..	3	1	..	..	..	..	..	..	..	..	.. 2
Jessore	..	10	..	2	2	2	1	..	..	..	..	.. 11
Khulna	..	3	..	1	..	..	..	..	..	..	..	.. 1
Rajshahi	..	5	..	..	..	..	..	..	..	..	..	.. 6
Dinajpur	..	Nil	..	..	..	..	..	..	..	..	..	.. Nil
Jalpaiguri	..	30	..	1	1	..	..	..	..	..	..	.. 70
Darjeeling	..											
Rangpur	..	253	..	1	..	132	..	..	..	..	..	.. 133
Bogra	..	6	..	..	..	..	..	..	..	..	..	.. 8
Pabna	..											
Malda	..	Nil	..	..	..							.. Nil
Dacca	..	Nil	..	..	..							.. Nil
Mymensingh	..											
Faridpur	..	13	..	1	..	..	..	..	..	..	..	.. 14
Bakarganj	..											
Chittagong	..	17	..	..	..	..	..	..	..	..	..	.. 4
Noakhali	..	Nil	..	..	..							.. Nil
Tippera	..											
Total	..	1,053	1	28	5	397	37	20	166	41	311	1,005

In 25, out of 118 municipalities, 179 persons were prosecuted for failing to report these occurrences to the registrars; of these 122 were convicted, 8 acquitted, 30 cases were struck off or withdrawn, while 19 were pending when the year closed. In the rural areas, the number of prosecutions was only 98, of which 73 ended in conviction, 12 in acquittal and 13 were pending. The number of such prosecutions exceeded 20 in the municipalities of Dacca and Chittagong and in the rural areas of the Sadar subdivision of 24-Parganas, while in others it was below that number. It was Chittagong Municipality again this year which showed the highest number of cases struck off or withdrawn for want of evidence. The statement below shows the number of cases of births and deaths verified by the vaccination inspecting staff in 1930 in each district of the province:—

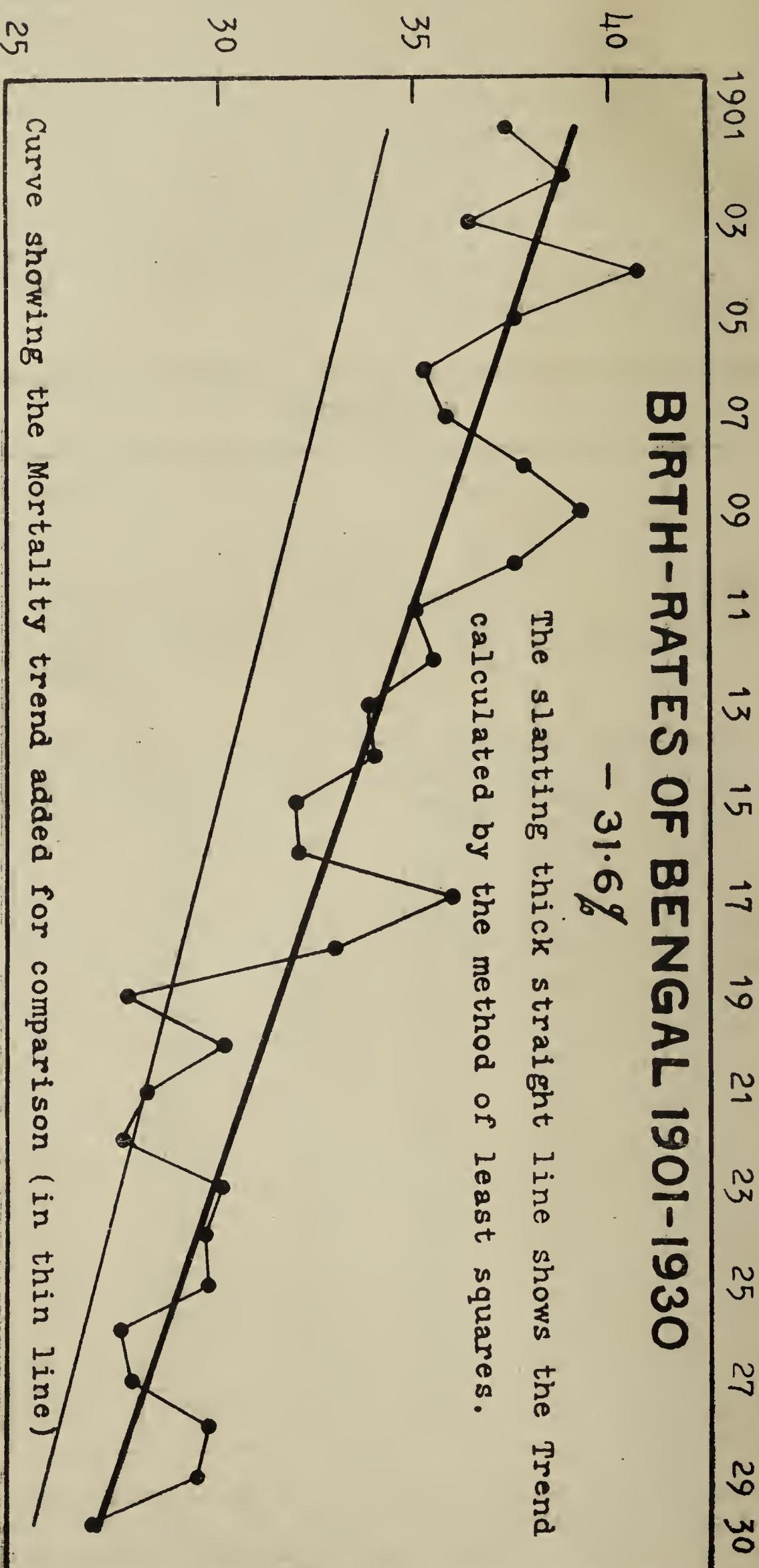
Verification of vital occurrences by the vaccination inspecting staff during 1930.

Districts.	Births.			Deaths.		
	Number examined.	Number of omissions detected.	Percentage of omissions to the total number of cases examined.	Number examined.	Number of omissions detected.	Percentage of omissions to the total number of cases examined.
Burdwan ..	11,570	94	.81	8,573	65	.76
Birbhum ..	1,616	52	3.22	2,187	17	.78
Bankura ..	110	Nil	..	125	Nil	..
Midnapur ..	3,314	60	1.81	1,891	16	.84
Hooghly ..	2,242	11	.49	1,790	5	.28
Howrah ..	1,374	78	5.67	856	9	1.05
24-Parganas ..	5,188	482	9.29	2,103	72	3.42
Nadia ..	1,918	36	1.88	966	20	2.07
Murshidabad ..	553	Nil	..	377	Nil	..
Jessore ..	1,892	45	2.38	1,807	40	2.21
Khulna ..	1,728	103	5.96	1,275	74	5.80
Rajshahi ..	3,371	86	2.55	3,373	78	2.31
Dinajpur ..	2,084	9	.43	2,087	10	.48
Jalpaiguri ..	772	12	1.55	556	11	1.98
Darjeeling ..	382	11	2.88	295	1	.34
Rangpur ..	2,672	109	4.07	2,339	54	2.30
Bogra ..	3,034	92	3.03	1,971	6	.30
Pabna ..	1,817	94	5.17	2,112	109	5.16
Malda ..	2,269	449	19.79	2,736	570	20.83
Dacca ..	6,678	160	2.40	4,031	92	2.28
Mymensingh ..	17,373	140	.80	13,180	70	.53
Faridpur ..	2,033	461	22.67	1,345	174	12.93
Bakarganj ..	16,719	188	1.12	12,366	124	1.00
Chittagong ..	2,050	40	1.95	1,357	10	.74
Noakhali ..	2,703	36	1.33	1,726	22	1.27
Tippera ..	2,663	191	7.17	1,653	51	3.08
Total ..	98,125	3,039	3.09	73,077	1,700	2.32

The omissions detected amounted to 3.1 per cent. of cases of births examined and 2.3 of those of deaths in the province. The highest percentage of omissions in birth registration (22.67) was returned from

Faridpur district and that in death registration (20·83) from Malda district.

25



Births and Birth-rates.

7. Provincial births and birth-rates.—Excluding still births, the number of children born during the year was 643,885 males and 594,046 females or a total of 1,237,931 giving a birth rate of 26·6 per mille of population against 709,145 males and 652,133 females or an aggregate of 1,361,278 with a birth-rate of 29·3 per mille in the previous year, and 28·7 per mille in the previous quinquennium, the birth-rate showing a decrease of 9·2 per cent. compared with the former and of 7·3 per cent. against the latter. 108 males were born to every 100 females, the same as during the previous year.

8. District births and birth-rates.—Birbhum district returned the highest birth-rate (41·2) and Jessore the lowest (19·5) in 1930. In thirteen of the districts the birth-rate was higher than the provincial rate. Compared with the previous decennium, it was lower in all the districts but 8, while against the previous year, it was reduced in all except in Bogra and Calcutta.

Birth rates per mille in districts.

Districts.	Average birth-rates for previous ten years.	Birth-rates per mille for 1930.	Difference between birth-rates for 1930 and the decennial average.	Percentages of difference.	Birth-rates per mille for 1929.	Difference between birth-rates for 1929 and 1930.	Percentages of difference.
Murshidabad ..	41·1	38·7	-2·4	-5·9	43·6	-4·9	-11·3
Birbhum ..	37·4	41·2	+3·8	+10·1	41·6	-0·4	-1·0
Bankura ..	34·8	30·5	-4·3	-12·4	37·3	-6·8	-18·2
Dinajpur ..	34·4	27·1	-7·3	-21·2	28·0	-0·9	-3·2
Nadia ..	34·0	27·2	-6·8	-20·0	32·7	-5·5	-16·8
Malda ..	33·4	27·5	-5·9	-17·7	32·7	-5·2	-15·9
Rajshahi ..	33·1	26·6	-6·5	-19·6	31·7	-5·1	-16·1
Darjeeling ..	32·8	35·3	+2·5	+7·6	35·5	-0·2	-0·6
Jalpaiguri ..	32·4	32·9	+0·5	+1·5	33·9	-1·0	-3·0
Noakhali ..	32·1	34·5	+2·4	+7·4	35·5	-1·0	-2·8
Bakarganj ..	29·8	26·4	-3·4	-11·4	32·3	-5·9	-18·3
Chittagong ..	29·8	29·7	-0·1	-0·4	29·9	-0·2	-0·7
Rangpur ..	29·8	24·1	-5·7	-19·2	26·5	-2·4	-9·1
Burdwan ..	29·7	25·2	-4·5	-15·2	31·7	-6·5	-20·5
Khulna ..	29·0	25·8	-3·2	-11·1	31·9	-6·1	-19·1
Midnapur ..	28·9	27·8	-1·1	-3·8	32·9	-5·1	-15·5
Faridpur ..	28·2	26·9	-1·3	-4·6	28·2	-1·3	-4·6
Dacca ..	27·6	26·9	-0·7	-2·6	27·7	-0·8	-2·9
Howrah ..	27·3	24·8	-2·5	-9·2	27·0	-2·2	-8·2
Pabna ..	25·9	22·5	-3·4	-13·1	24·8	-2·3	-9·3

District.	Average birth-rates for previous ten years.	Birth-rates per mile for 1930.	Difference between birth-rates for 1930 and the decennial average.	Percentages of difference.	Birth-rates per mile for 1929.	Difference between birth-rates for 1929 and 1930.	Percentages of difference.
Mymensingh ..	25·9	24·0	-1·9	-7·4	24·3	-0·3	-1·2
Hooghly ..	25·8	23·9	-1·9	-7·4	25·6	-1·7	-6·7
Jessore ..	25·6	19·5	-6·1	-23·8	23·2	-3·7	-16·0
Bogra ..	24·8	24·9	+0·1	+0·4	24·3	+0·6	+2·4
24-Parganas ..	24·3	25·8	+1·5	+6·2	28·7	-2·9	-10·1
Tippera ..	22·7	23·0	+0·3	+1·3	24·6	-1·6	-6·5
Calcutta ..	17·4	21·5	+4·1	+23·6	21·1	+0·4	+1·9



9. Births and birth-rates in Municipalities.—The aggregate birth-rate in towns in 1930 was 20·3 per mille against 21·5 in 1929 and was thus reduced by 5·6 per cent. Twenty-one towns returned rates above the provincial average. Ten municipalities registered birth-rates between 30 and 40 per mille; 28 between 20 and 30; 64 between 10 and 20 while the following 15 returned rates below 10 per mille, which are obviously absurd:—

Towns returning absurd birth-rates.

						1929.	1930.
Katwa . .	..	..	..	..	..	12·3	9·8
Comilla	..	..	..	..	..	9·6	9·6
Bogra	..	..	..	..	..	5·4	9·5
Jhalakati	..	..	..	..	..	10·7	9·0
Khulna	..	..	..	..	..	11·9	8·8
Budge-Budge	..	..	..	..	..	10·1	8·2
Sherpur	..	..	..	..	..	12·3	8·0
Barrackpur	..	..	..	..	..	9·0	7·8
Pabna	..	..	..	..	..	12·4	7·2
Gobardanga	..	..	..	..	..	13·3	7·0
Burdwan	..	..	..	..	..	9·2	6·8
Kotchandpur	..		..	..	..	9·8	6·6
Dum-Dum	..	..	..	..	..	3·6	6·5
Gauripur	..	..	..	..	..	7·7	4·6
Dinajpur	..	..	..	..	..	3·1	4·2

It would appear from the above list that with the exception of Bogra, Dum-Dum and Dinajpur, all the others have become still worse and exceedingly neglectful in the matter of registration of vital occurrences.

10. Births and birth-rates in rural areas.—The aggregate birth-rate in rural areas in 1930, 27·1 per mille was lower by 9·1 per cent. than that in the previous year—29·8 per mille. In 274 circles, it was higher than the provincial average. 3 circles returned rates of 60 per mille and above (Sainthia and Muhaminad Bazar, both in Birbhum district, 100·2 and 64·9 respectively and Nawabganj in Malda 70·7), 7 between 50 and 60, 22 between 40 and 50, 143 between 30 and 40, 299 between 20 and 30, 58 between 10 and 20 and 3 below 10 per mille (Bauria in Howrah district 8·5, Noapara in 24-Parganas 4·3, and Kandi in Murshidabad 4·4).

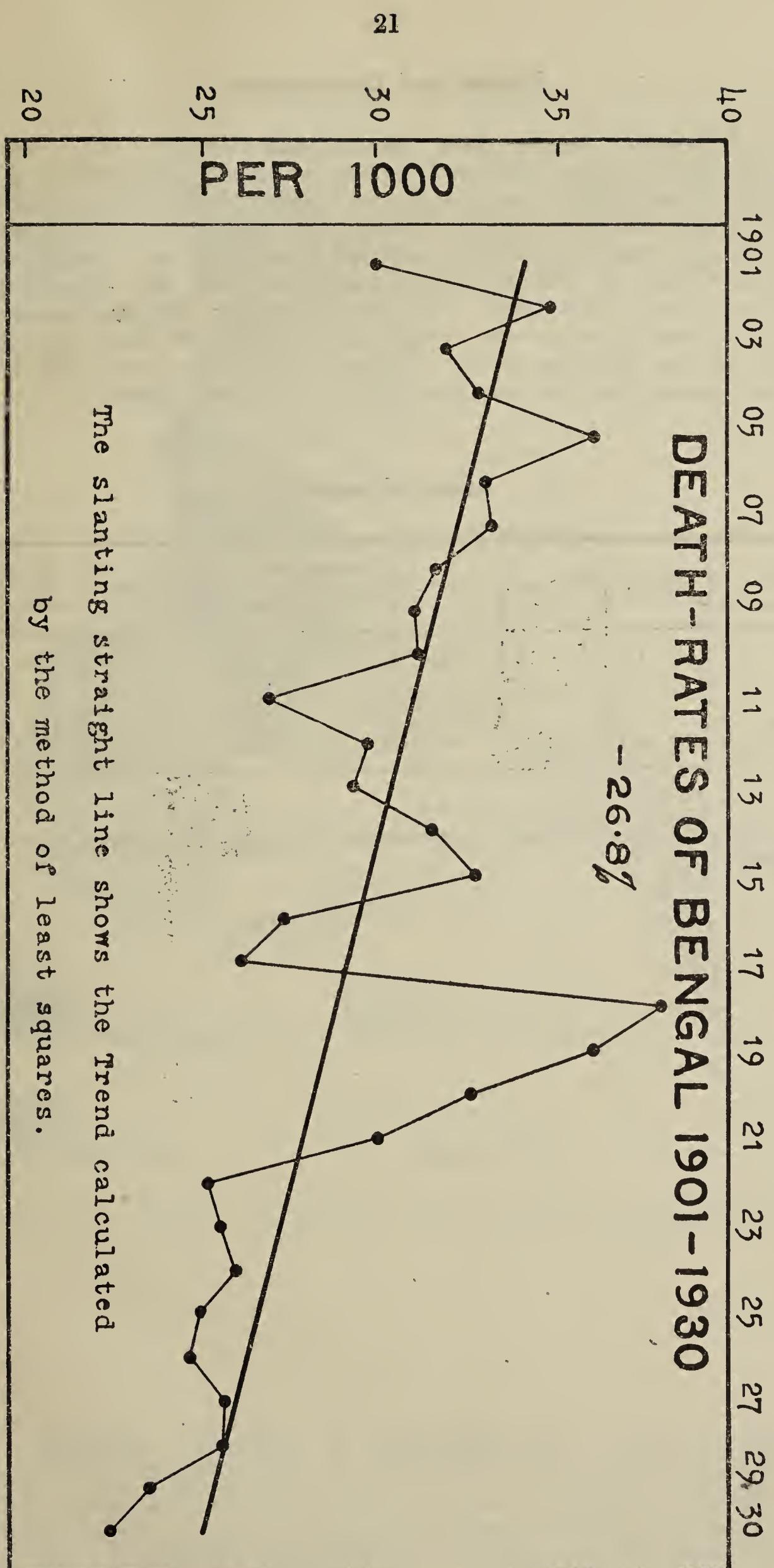
11. Seasonal incidence of births.—The provincial birth-rate as usual was highest (3·0) in December 1930 and lowest (1·4) in August. With the exception of January and November, in which it was the same, it was lower in every month compared with the previous year, the chief reductions occurring in August and September.

Seasonal incidence of Births.

Months.		1929.	1930.	Difference.	Percentage of difference.
January	..	2.7	2.7	±0	±0
February	..	2.6	2.4	-0.2	-7.7
March	..	2.9	2.6	-0.3	-10.4
April	..	2.8	2.4	-0.4	-14.3
May	..	2.1	1.9	-0.2	-9.5
June	..	2.0	1.7	-0.3	-15.0
July	..	1.9	1.6	-0.3	-15.8
August	..	1.8	1.4	-0.4	-22.2
September	..	2.1	1.7	-0.4	-19.1
October	..	2.5	2.4	-0.1	-4.0
November	..	2.8	2.8	±0	±0
December	..	3.1	3.0	-0.1	-3.2

12. **Still births.**—47,428 still births were registered during the year against 53,886 in the previous year. This number is the lowest on record since 1911. The proportion of still births to total births was 3.69 in 1930 compared with 3.81 in 1929. From the following table which shows their distribution in the various districts of the province, it is obvious that the number of such births was reduced in all the other districts except in Birbhum, Bankura, Midnapur, Hooghly Nadia, Rajshahi, Dacca, Mymensingh and Tippera, in which it showed an increase.

Districts.	Proportion of still births to total births, per cent.		Increase + or decrease -
	1929.	1930.	
Calcutta	7.37	5.92	—
Bogra	6.58	5.70	—
Chittagong	6.48	6.16	—
Noakhali	6.40	6.21	—
Jalpaiguri	6.25	6.10	—
Pabna	5.84	5.82	—
Rajshahi	5.75	5.79	+
Rangpur	5.52	5.26	—
Darjeeling	5.42	5.41	—
Jessore	5.24	3.40	—
Tippera	4.64	4.68	+
Mymensingh	4.45	4.80	+
Murshidabad	4.12	3.86	—
Khulna	3.88	3.25	—
Faridpur	3.82	3.17	—
Dacca	3.64	4.13	+
Dinajpur	3.62	2.11	—
Midnapur	2.91	3.02	+
Nadia	2.27	2.28	+
Howrah	2.19	2.16	—
Bakarganj	2.06	1.87	—
Birbhum	1.92	2.58	+
Malda	1.79	1.44	—
Burdwan	1.24	1.14	—
24-Parganas	0.94	0.78	—
Hooghly	0.41	0.43	+
Bankura	0.34	0.38	+
Total average for the province	3.81	3.69	—



The slanting straight line shows the trend calculated
by the method of least squares.

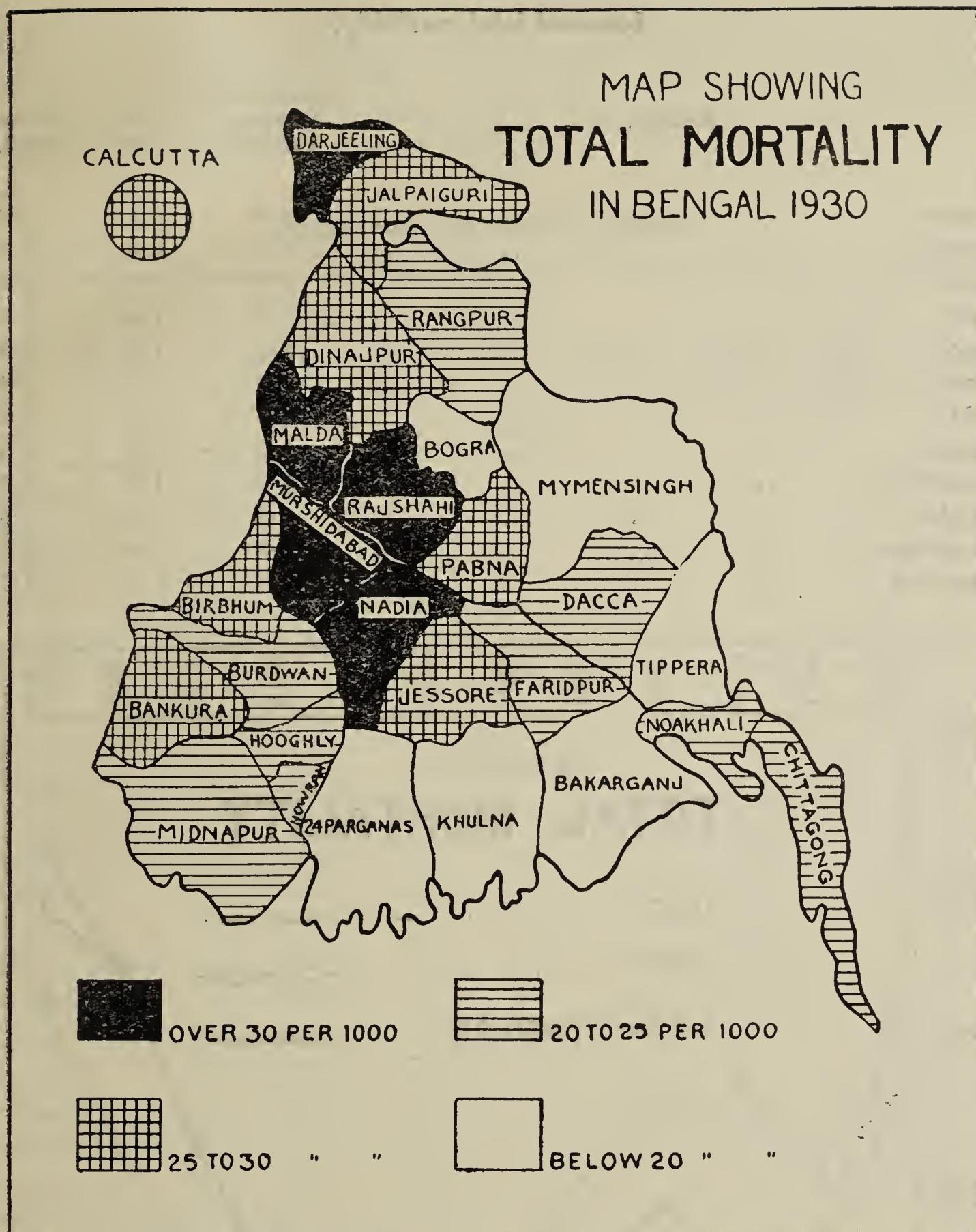
Deaths and Death-rates.

13. Provincial deaths and death-rates.—During the year 1930, 1,044,256 deaths were registered in the province, representing a death-rate of 22·4 per mille from all causes against 1,094,263 deaths with a rate of 23·5 per mille in 1929 and 24·8 during the previous quinquennium. The death-rate was thus further reduced by 4·7 per cent. compared with the former, and by 9·7 per cent. compared with the latter. It was lowest on record since 1900. 539,260 males and 504,996 females died during the year under review compared with 560,834 males and 533,429 females in the previous year. 106 males died to every 100 females. The death-rate from the various causes is shown below:—

Causes of deaths.

Years.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	Respira- tory diseases.	Injuries.	All other causes.	All causes.
1930 ..	1·2	·2	15·1	·8	1·2	·4	3·4	22·4
1929 ..	1·7	·4	15·3	·8	1·1	·4	3·6	23·5
Percentage difference ..	-29·4	-50·0	-1·3	+	+9·0	+	-5·6	-4·7

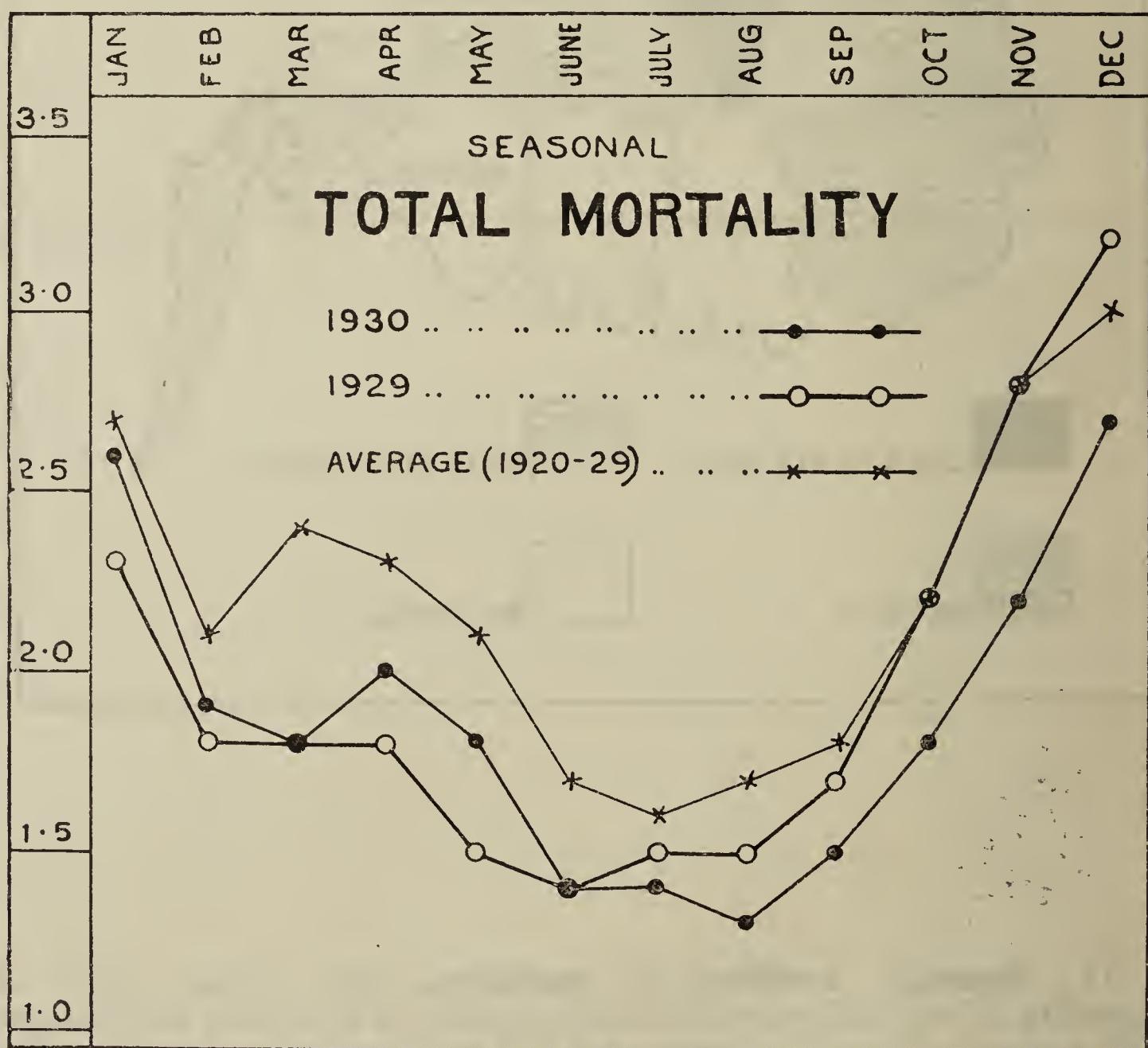
Thus with the exception of respiratory diseases, there was a reduction all round.



14. **Seasonal incidence of mortality.**—The highest rates of mortality 2·7 and 2·6 per mille were registered in December and January 1930 respectively and the lowest rate 1·3 was recorded in August. The death rate in 1930 was lower than the decennial average in every month of the year. Compared with 1929 it was reduced in the latter half of the year and increased in the first half except in March and June when it was the same.

Seasonal total mortality.

Months.	Decennial average, 1920-29.					Year, 1929.	Year, 1930.
		
January	2·7	2·3	2·6
February	2·1	1·8	1·9
March	2·4	1·8	1·8
April	2·3	1·8	2·0
May	2·1	1·5	1·8
June	1·7	1·4	1·4
July	1·6	1·5	1·4
August	1·7	1·5	1·3
September	1·8	1·7	1·5
October	2·2	2·2	1·8
November	2·8	2·8	2·2
December	3·0	3·2	2·7



15. **District deaths and death-rates.**—14 out of 27 districts returned death-rates above the provincial average, Nadia topping the list with

a rate of 32·8 per mille. Mymensingh and Tippera as usual returned the lowest rates. With the exception of Malda, Murshidabad and Nadia, all the other districts showed lower rates than the previous decennium. Compared with the previous year, the death-rate was reduced in every other district but six.

Death rates per mille in districts.

Districts.	Average death rates for previous ten years.	Death rates per mille for 1930.	Difference between death rates of 1930 and the decennial average.	Percentages of difference.	Death rates per mille for 1929.	Difference between death rates of 1929 and 1930.	Percentages of difference.
Rajshahi	35·3	30·7	-4·6	-13·0	33·1	-2·4	-7·3
Darjeeling	34·4	31·2	-3·2	-9·3	31·0	+0·2	+0·6
Dinajpur	33·2	27·9	-5·3	-16·0	28·3	-0·4	-1·4
Nadia	32·8	32·8	+0	+0	33·3	-0·5	-1·5
Murshidabad	31·9	32·1	+0·2	+0·6	28·0	+4·1	+14·6
Birbhum	30·7	28·7	-2·0	-6·5	25·6	+3·1	+12·1
Calcutta	30·3	28·9	-1·4	-4·6	30·6	-1·7	-5·6
Jessore	30·0	27·0	-3·0	-10·0	33·0	-6·0	-18·2
Jalpaiguri	28·4	27·1	-1·3	-4·6	27·1	+0	+0
Burdwan	28·1	23·5	-4·6	-16·4	24·5	-1·0	-4·1
Bankura	27·9	25·4	-2·5	-9·0	26·6	-1·2	-4·5
Rangpur	27·5	22·0	-5·5	-20·0	23·0	-1·0	-4·4
Malda	27·4	32·2	+4·8	+17·5	28·6	+3·6	+12·6
Howrah	26·7	21·2	-5·5	-20·6	21·9	-0·7	-3·2
Hooghly	26·7	20·4	-6·3	-23·6	20·2	+0·2	+1·0
Pabna	26·4	25·5	-0·9	-3·4	25·7	-0·2	-0·8
Faridpur	26·1	25·0	-1·1	-4·2	26·5	-1·5	-5·7
Midnapur	25·7	20·9	-4·8	-18·7	21·5	-0·6	-2·8
Khulna	25·6	19·5	-6·1	-23·8	26·1	-6·6	-25·3
Bakarganj	25·4	17·4	-8·0	-31·5	20·4	-3·0	-14·7
Bogra	25·2	18·4	-6·8	-27·0	18·5	-0·1	-0·5
Chittagong	24·9	20·3	-4·6	-18·5	21·9	-1·6	-7·3
24-Parganas	24·8	18·3	-6·5	-26·2	19·5	-1·2	-6·2
Noakhali	24·4	20·4	-4·0	-16·4	21·2	-0·8	-3·8
Dacca	22·9	21·3	-1·6	-7·0	22·1	-·8	-3·6
Mymensingh	21·8	16·2	-5·6	-25·7	17·1	-0·9	-5·3
Tippera	17·6	15·3	-2·3	-13·1	16·2	-0·9	-5·6

16. **Deaths and death-rates in towns.**—67,964 deaths with an aggregate death-rate of 21·8 per mille were registered in the towns of Bengal in 1930 against 73,361 deaths and a rate of 23·6 per mille in 1929, showing a reduction of 5,397 in the total number of deaths and 7·6 per cent. in the death-rate. The rate was 11·0 per cent. less compared

with the previous quinquennium. 23 out of 118 towns returned death-rates above the provincial average, Old Malda with 40·1 per mille heading the list. 4 towns registered rates between 30 and 40 per mille, 28 between 20 and 30, 67 between 10 and 20, while the following 18 recorded rates which are absurd:—

Towns returning absurd death rates.

Towns.	Death-rates.	
	1929.	1930.
Barasat	..	9·5 9·7
Bajitpur	..	10·3 9·0
Pabna	..	12·1 8·8
Champdani	..	9·4 8·4
Dinajpur	..	6·9 8·4
Garulia	..	10·6 8·3
Baruipur	..	9·6 8·2
Muktagacha	..	9·0 8·1
Gaibandha	..	9·2 7·8
Bogra	..	9·1 7·5
Jhalakati	..	11·7 7·5
Kishorganj	..	8·1 7·4
Bhola	..	7·9 6·8
Dum-Dum	..	5·4 6·5
Comilla	..	6·1 6·2
Barrackpur	..	5·7 6·0
Patuakhali	..	9·9 6·0
Gauripur	..	5·5 5·5

With the exception of 5 towns in which there has been a slight improvement in registration, the rest have returned rates even lower than those of the previous year. Year after year this neglect in the accurate registration of vital occurrences is noticed in these reports and the attention of the local authorities invited to this defect, but all to no avail.

17. Deaths and death-rates in rural areas.—In the year 1930, the rural areas in the province returned 976,292 deaths and an aggregate death-rate of 22·5 per mille, compared with a total of 1,020,902 deaths and a death-rate of 23·5 per mille in the previous year. The number was thus reduced by 44,610 and the death-rate by 4·3 per cent. The latter was lower than the mean of the previous five years by 9·6 per cent. 13 of these rural areas registered rates higher than the provincial average. Classifying the death-rates according to the registering circles, 3 of them returned rates of 60 and above (Sainthia in Birbhum district 17·6 per mille, Joypur in Bankura 67·6, Nawabganj in Malda 63·8), 14 others between 40 and 50, 90 between 30 and 40, 248 between 20 and 30, 175 between 10 and 20, and 5 below 10 per mille (Iswarganj in Mymensingh district 9·6, Debidwar in Tippera 9·1, Pakundia in Mymensingh 8·9, Bauria in Howrah 6·9 and Noapara in 24-Parganas 3·2).

18. Comparison of death-rates in towns with those in rural areas.

—The death-rate from cholera was the same in both the rural and the urban areas, from fevers less and from all other causes higher in the latter than in the former. The total death-rate in the rural areas was however higher than in the urban areas, due to the higher prevalence of fever in the former.

Causes.	During 1930.	
	Urban.	Rural.
Cholera	..	1·2
Smallpox	..	1·0
Plague
Fevers	..	4·5
Dysentery and diarrhoea	..	2·5
Respiratory diseases	..	5·1
Injuries	..	0·5
Other causes	..	6·9
All causes	..	21·8
		22·5

19. Comparison of Calcutta death-rates with those of other Bengal towns and rural areas.—With the exception of fevers, the Calcutta death-rate from every other cause was higher than that in the towns or rural areas of Bengal.

Causes.	Calcutta (1930).	Bengal	Bengal
		towns (1930).	rural areas (1930).
Cholera	1·6	1·0	1·2
Smallpox	1·7	0·6	0·2
Plague	..	..	..
Fevers	3·2	5·3	15·9
Dysentery and Diarrhoea	2·9	2·2	0·7
Respiratory diseases	8·7	3·2	0·9
Injuries	0·7	0·4	0·4
Other causes	10·0	5·3	3·1
Death-rate	28·9	18·1	22·5

Turning to subsidiary heads, with the exception of malaria and other fevers, all the other diseases appear to have prevailed more in Calcutta in 1930 than in either the other towns or the rural areas of Bengal. This is rather due to a more accurate diagnosis obtaining in Calcutta than elsewhere. No death from relapsing fever was reported in Calcutta. Deaths from child birth were much less in Calcutta than in other places.

Causes.	Death rates per mille in 1930.		
	Calcutta.	Other Bengal towns.	Rural areas.
Malaria
Enteric fever
Measles
Relapsing fever
Kala-azar
Other fevers
Dysentery
Diarrhoea
Influenza
Pneumonia
Phthisis
Other respiratory diseases
Child birth

20. **Deaths from maternal causes.**—9,515 deaths from maternal causes were registered in the province in 1930 compared with 9,770 in the previous year. Of the total deaths from this cause, 532 were returned from the towns and the rest from the rural areas. The provincial death-rate was 7·7 per 1,000 births against 7·2 in 1929. There was an increase of 17·5 and 47·9 per cent. respectively in Rajshahi and Chittagong Divisions and a reduction in Burdwan and Presidency, the rate in Dacca remaining the same.

Divisions.	Deaths.	Rates per 1,000 births, 1929.	Rates per 1,000 births, 1930.	Increase+ or decrease-
Burdwan	..	1,522	7·1	6·7
Presidency	..	1,634	7·0	6·6
Rajshahi	..	3,107	9·7	11·4
Dacca	..	2,108	6·4	6·4
Chittagong	..	1,144	4·8	7·1
Total	..	9,515	7·2	7·7

21. Mortality according to Sex.—539,260 males and 504,996 females died in 1930 against 560,834 males and 533,429 females in the previous year. The death-rates 22·4 for males and 22·5 for females were less by 3·9 and 5·1 per cent., than those in 1929. Compared with the average of the previous quinquennium the reduction was 10·4 per cent. for males and 8·9 for the females. The female death-rate exceeded that for the males in 12 out of 27 districts of the province. The highest rate for male deaths 33·8 per mille was returned from Malda district and that for females 39·5 per mille from Calcutta. The lowest rates for both sexes (15·4 and 15·2) were registered in Tippera district.

22. Mortality according to class.—Classified according to class, 561,527 Musalmans, 449,778 Hindus, 2,186 Christians, 2,919 Buddhists and 27,846 other classes died during 1930, the death-rates for Hindus and Musalmans being the same during the year under review and the lowest on record since 1911.

Deaths among classes.

Classes.		Ratio of deaths per mille, 1929.	Ratio of deaths per mille, 1930.	Difference.	Percentages of difference.
Christians	.. .. ..	20·0	14·9	-5·1	-25·5
Hindus	.. .. ..	23·1	22·3	-0·8	-3·5
Musalmans	.. .. ..	23·6	22·3	-1·3	-5·5
Buddhists	.. .. ..	20·4	19·9	-0·5	-2·5
Other classes	.. .. ..	31·9	32·6	+0·7	+2·2
Total	..	23·5	22·4	-1·1	-4·7

The highest death-rate among the Hindus (32·8) was registered in Malda district and among the Musalmans (37·2) in Darjeeling district, while the lowest rates (15·4 and 15·1) for the two communities were returned from Bogra and Tippera respectively.

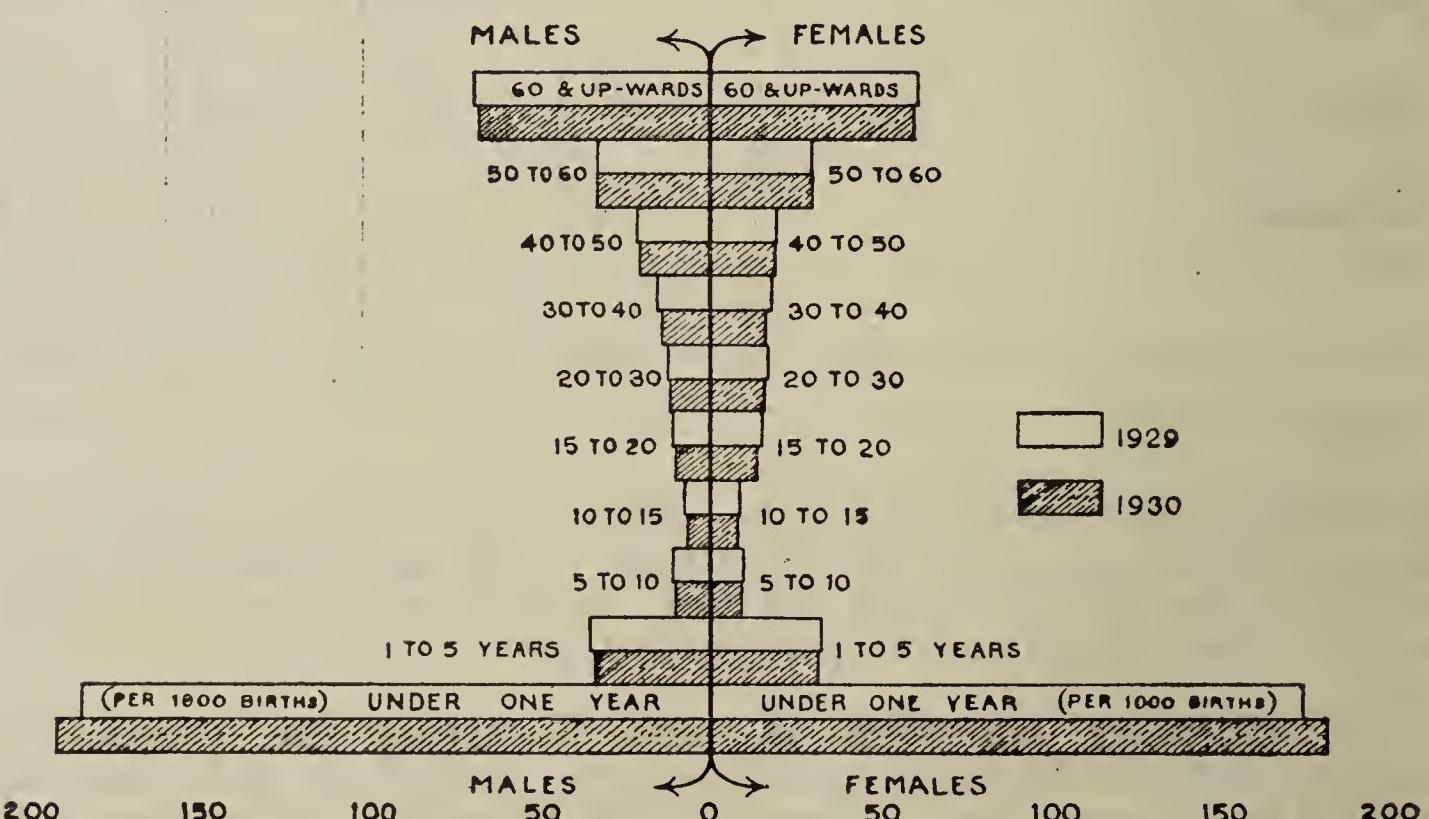
23. Mortality according to age.—Excepting the extreme age periods where the increase was 4·1 per cent. for infants under one year and 0·3 for persons aged between 50 and 60 years, the death-rate for every other age period was reduced in 1930 compared with that during the previous year. The greatest increase 8·0 per cent. was among infants 1 to 6 months old, followed by 6·2 per cent. among the age period of 6 to 12 months.

Mortality according to age.

Age periods.		1929, per mille.	1930, per mille.	Difference.	Percentage variation.
Under one month*	..	103.2	105.0	+1.8	+1.7
1—6 months*	..	46.3	50.0	+3.7	+8.0
6—12 months*	..	30.4	32.3	+1.9	+6.2
Under one year*	..	179.9	187.3	+7.4	+4.1
1—5 years	..	33.9	32.8	-1.1	-3.3
5—10 years	..	10.3	9.7	-0.6	-5.8
10—15 years	..	7.6	7.3	-0.3	-4.0
15—20 years	..	13.1	12.0	-1.1	-8.4
20—30 years	..	14.8	13.8	-1.0	-6.8
30—40 years	..	16.6	15.4	-1.2	-7.2
40—50 years	..	20.3	19.9	-0.4	-2.0
50—60 years	..	31.7	31.8	+0.1	+0.3
60 years and above	..	65.4	63.8	-1.6	-2.5

*Per 1,000 births.

DEATH RATE AT EACH AGE PERIOD

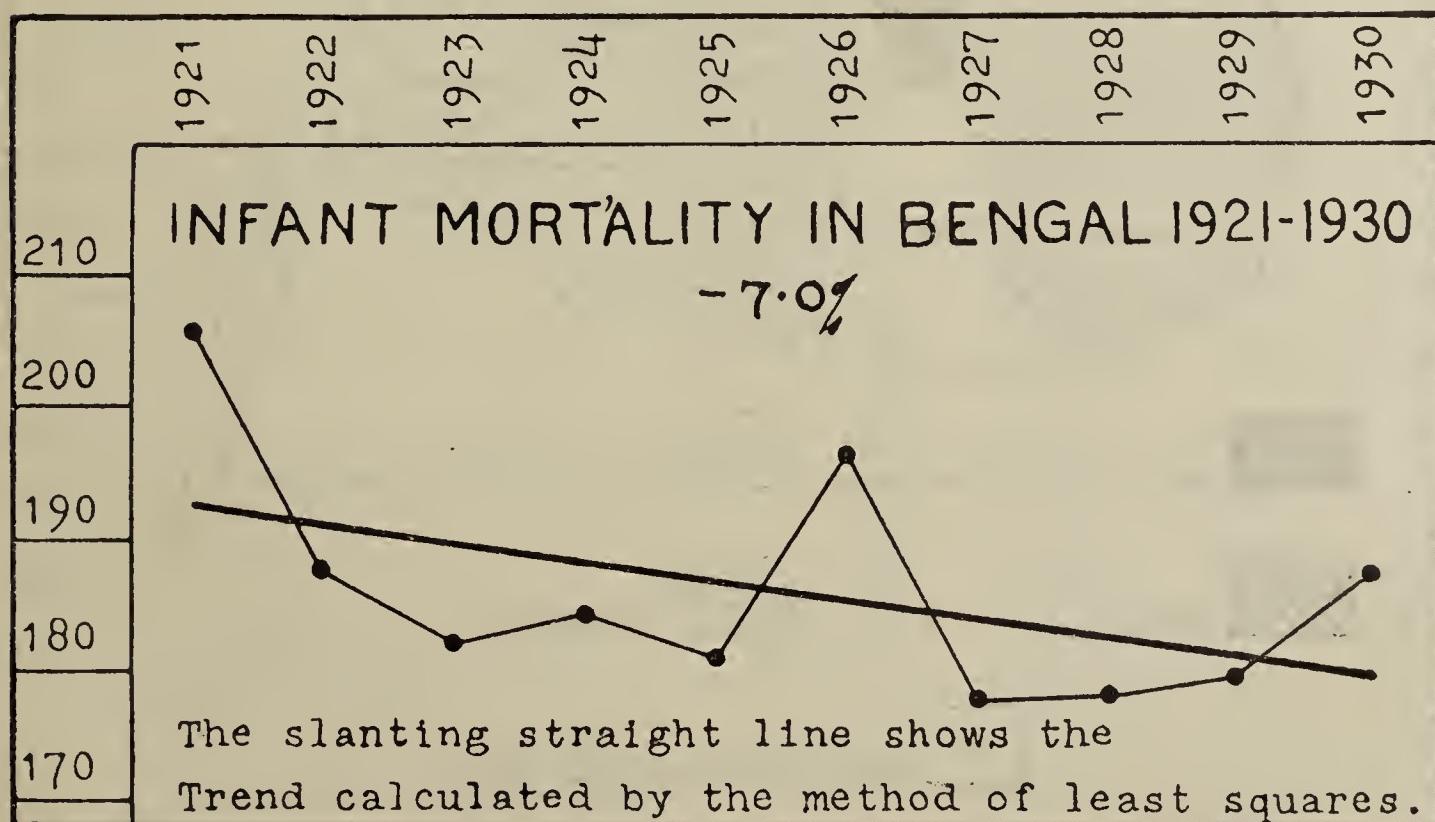


Classified according to sex, it would appear that more females died than males at the child-bearing period of life, viz., 10 to 40 years, more so between the fifteenth and thirtieth year of their life.

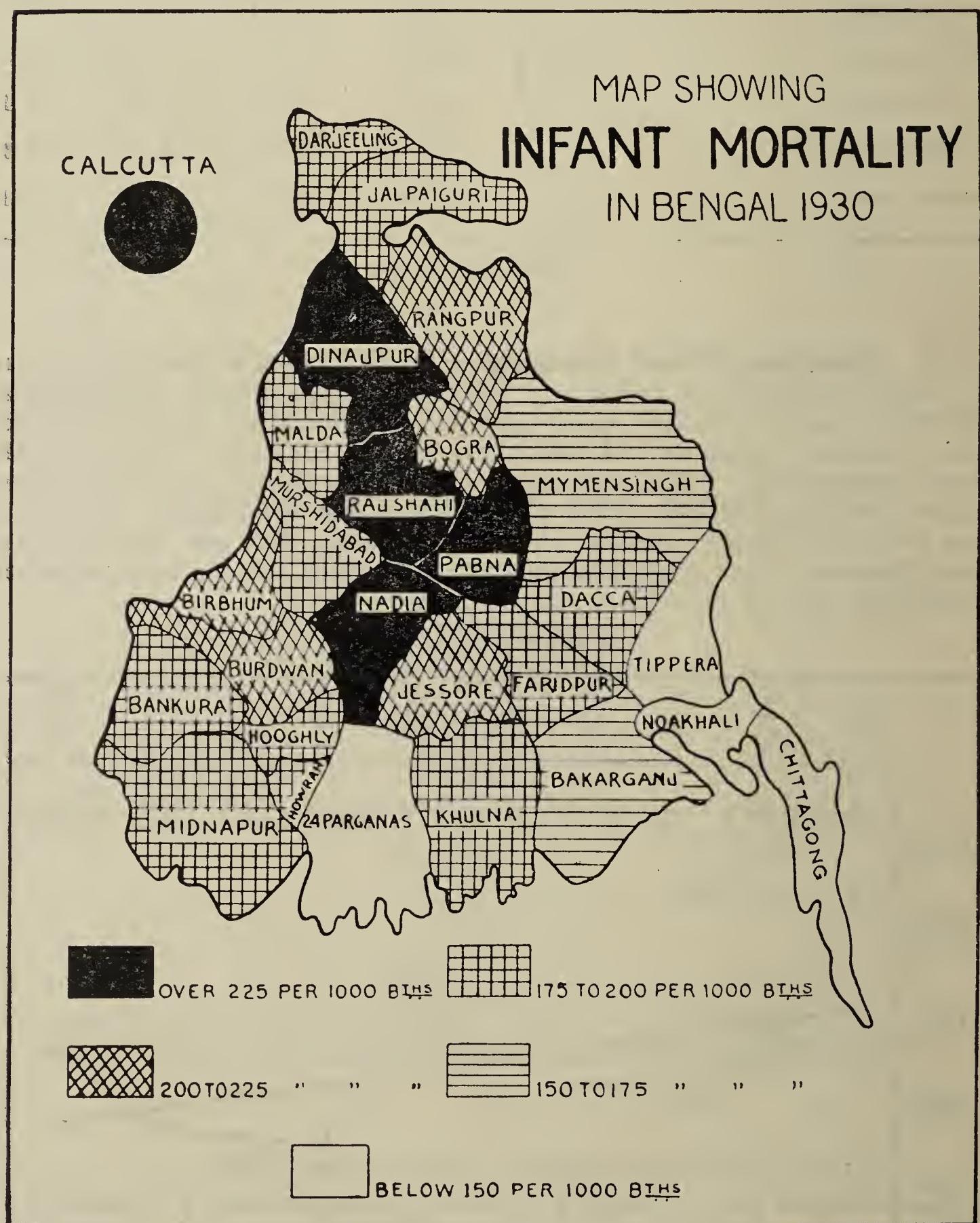
Age periods.	Death-rate per 1,000 living at various ages.			
	Males.	Females.	Difference.	Percentages.
Infants*	192·9	181·2	+11·7	+6·4
1—5 years	34·5	31·2	+3·3	+10·6
5—10 years	10·2	9·2	+1·0	+10·9
10—15 years	7·0	7·5	-0·5	-6·7
15—20 years	10·3	13·6	-3·3	-24·3
20—30 years	11·9	15·6	-3·7	-23·7
30—40 years	14·6	16·2	-1·6	-9·9
40—50 years	20·6	19·0	+1·6	+8·4
50—60 years	33·5	29·9	+3·6	+12·0
Over 60 years	67·6	59·9	+7·7	+12·8

*Per 1,000 births.

24. **Provincial Infant Mortality.**—231,872 infants under one year, of whom 124,212 were males and 107,660 females died in 1930 against 244,864 infants (131,209 males and 113,655 females) in the previous year, the death-rates for the two years being 187·3 and 179·9 per 1,000 births respectively. 22·2 per cent. of the total deaths occurred among infants below one year. 56·0 per cent. of the total infant mortality was recorded among infants under one month, 26·6 per cent. among those between 1 and 6 months and 17·3 per cent. at the age period of between 6 and 12 months.

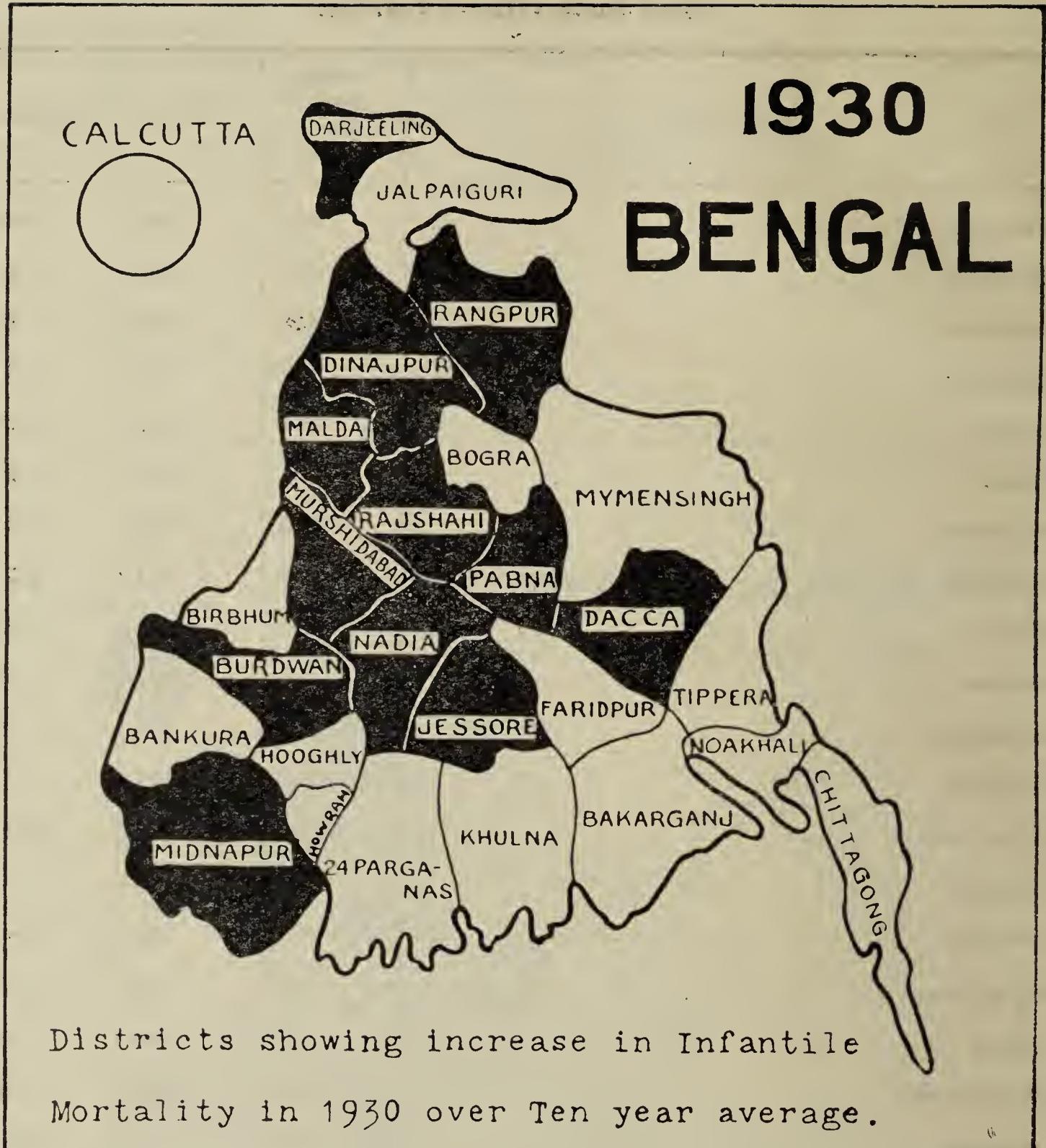


25. **Infant mortality in districts.**—14 districts returned death-rates from infant mortality above the provincial average. The highest rate (268) was registered in Calcutta followed by Nadia (257) and the lowest (129) in Tippera. Compared with the mean rate for the previous decennium, 12 districts show an increase, 14 a decrease, while no change is noticed in the remaining district of Faridpur.



Infant death-rates in districts.

Districts.				Average death rates, 1920-29.	1930.	Difference.
Calcutta	..	..	..	315	268	- 47
Rajshahi	..	..	..	225	249	+ 24
Dinajpur	..	..	..	218	235	+ 17
Rangpur	..	..	..	217	222	+ 5
Nadia	..	..	..	213	257	+ 44
Bogra	..	..	..	211	201	- 10
Birbhum	..	..	..	210	202	- 8
Burdwan	..	..	..	209	214	+ 5
Howrah	..	..	..	202	184	- 18
Khulna	..	..	..	200	189	- 11
Bakarganj	..	..	..	198	161	- 37
Bankura	..	..	..	193	191	- 2
Jalpaiguri	..	..	..	193	187	- 6
Hooghly	..	..	..	191	179	- 12
Faridpur	..	..	..	187	187	<u>+ 0</u>
Mymensingh	..	..	..	185	173	- 12
Pabna	..	..	..	185	230	+ 45
Murshidabad	..	..	..	182	200	+ 18
Midnapur	..	..	..	175	177	+ 2
Dacca	..	..	..	173	182	+ 9
Darjeeling	..	..	..	172	178	+ 6
Jessore	..	..	..	171	205	+ 34
24-Parganas	..	..	..	166	144	- 22
Malda	..	..	..	152	200	+ 48
Chittagong	..	..	..	151	135	- 16
Noakhali	..	..	..	142	141	- 1
Tippera	..	..	..	136	129	- 7



From the following table showing the classification of infant mortality according to sex, it is noticed that the male death-rate was higher than the female in all the districts except Pabna and Nadia, where the reverse was the case. Compared with the average of the previous decade, the death-rates for both males and females were increased in 12 districts and reduced in 11. The male rate alone was higher in Faridpur and Noakhali and the female rate in Bankura and Birbhum.

Infant mortality rates for each district per 1,000 births according to sex.

Districts.	Male death rates.			Female death rates.			Increase + or de- crease— of male compared with female deaths, 1930.
	Average for the previous 10 years.	1930.	Increase + or decrease -	Average for the previous 10 years.	1930.	Increase + or decrease -	
Calcutta ..	320·1	289·3	-30·8	310·3	243·3	-67·0	+46·0
Rajshahi ..	228·0	250·5	+22·5	222·1	248·4	+26·3	+2·1
Dinajpur ..	225·6	239·6	+14·0	210·9	229·5	+18·6	+10·1
Rangpur ..	225·4	233·3	+7·9	207·2	209·6	+2·4	+23·7
Nadia ..	215·9	255·4	+39·5	209·7	259·1	+49·4	-3·6
Bogra ..	214·0	209·3	-4·7	207·0	191·7	-15·3	+17·7
Birbhum ..	223·2	207·5	-15·7	196·6	196·7	+·1	+10·8
Burdwan ..	218·6	224·0	+5·4	198·9	203·1	+4·2	+20·9
Howrah ..	210·3	190·7	-19·6	193·4	177·4	-16·0	+13·3
Khulna ..	205·3	202·4	-2·9	193·3	174·2	-19·1	+28·2
Bakarganj ..	207·6	169·2	-38·4	187·6	152·3	-35·3	+16·9
Bankura ..	204·4	198·7	-5·7	181·6	183·0	+1·4	+15·7
Jalpaiguri ..	199·0	190·9	-8·1	186·4	183·8	-2·6	+7·1
Hooghly ..	196·7	182·8	-13·9	184·9	173·9	-11·0	+8·9
Faridpur ..	191·6	192·9	+1·3	182·8	180·9	-1·9	+12·0
Mymensingh ..	191·2	178·4	-12·8	178·4	168·1	-10·3	+10·3
Pabna ..	185·3	224·8	+39·5	183·9	236·3	+52·4	-11·5
Murshidabad ..	188·8	207·6	+18·8	174·6	191·4	+16·8	+16·2
Midnapur ..	177·6	179·4	+1·8	173·1	174·9	+1·8	+4·5
Dacca ..	179·0	188·9	+9·9	166·8	174·3	+7·5	+14·6
Darjeeling ..	178·7	188·5	+9·8	165·9	167·4	+1·5	+21·1
Jessore ..	169·8	207·2	+37·4	171·9	202·9	+31·0	+4·3
24-Parganas ..	170·1	149·6	-20·5	161·9	136·9	-25·0	+12·7
Malda ..	153·4	201·2	+47·8	150·7	198·1	+47·4	+3·1
Chittagong ..	152·8	135·8	-17·0	148·7	133·8	-14·9	+2·0
Noakhali ..	143·4	145·4	+2·0	140·2	136·6	-3·6	+8·8
Tippera ..	144·2	134·9	-9·3	127·4	122·3	-5·1	+12·6

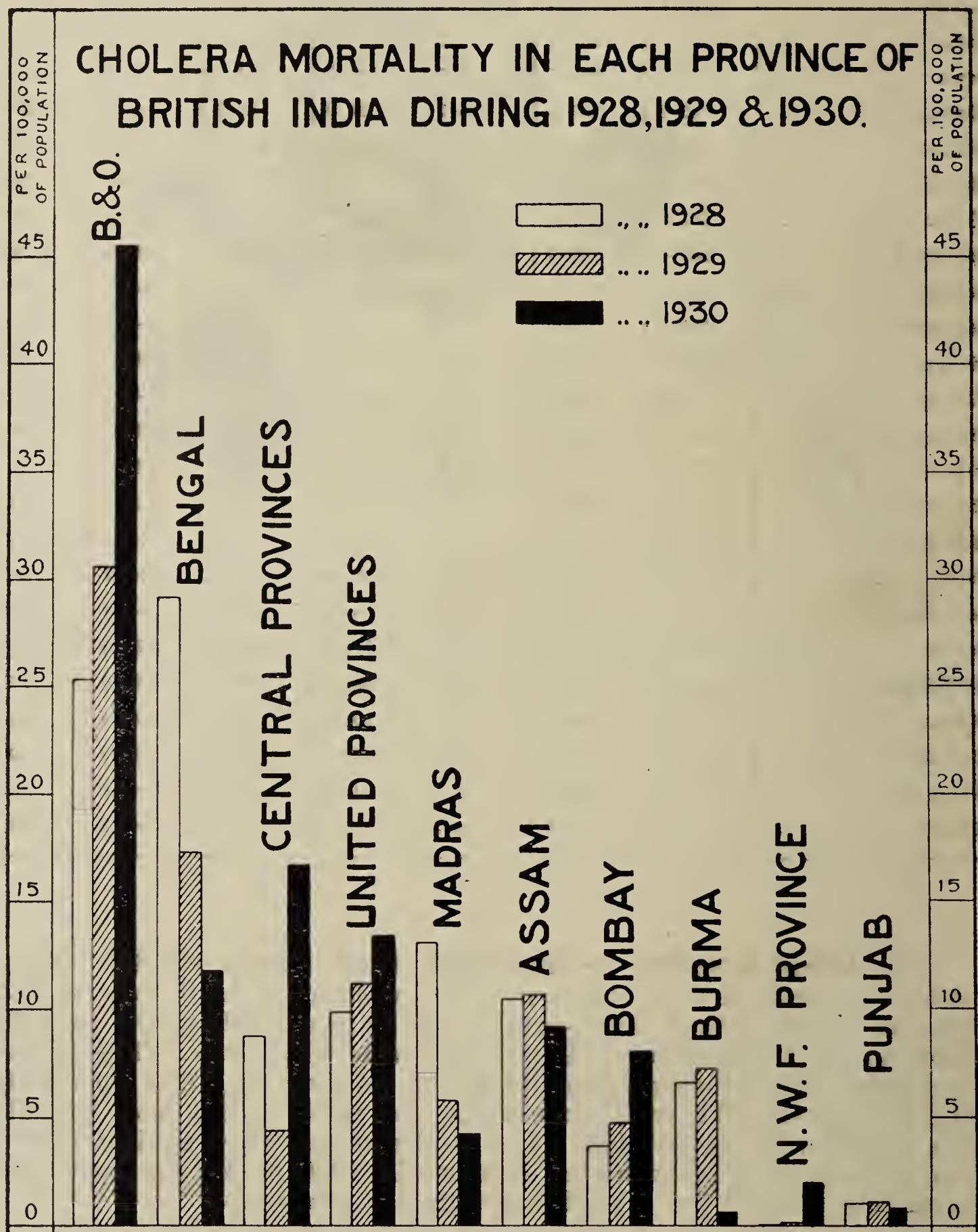
26. **Infant mortality in towns and rural areas.**—12,803 infants under one year died in towns in 1930, yielding a death-rate of 202·4 against 13,509 with a death-rate of 201·5 per 1,000 births in 1929, showing an increase of 0·4 per cent. over the latter. The highest rate 384·6 was returned from Old Malda followed by 372·5 from Kalna and the lowest 20·2 from Gaibandha, the latter being most probably due to defective registration. The rural rate was 186·5 against 178·7 in the previous year showing an increase in 1930 of 4·3 per cent. The rural rate was 7·9 per cent. lower than the urban one.

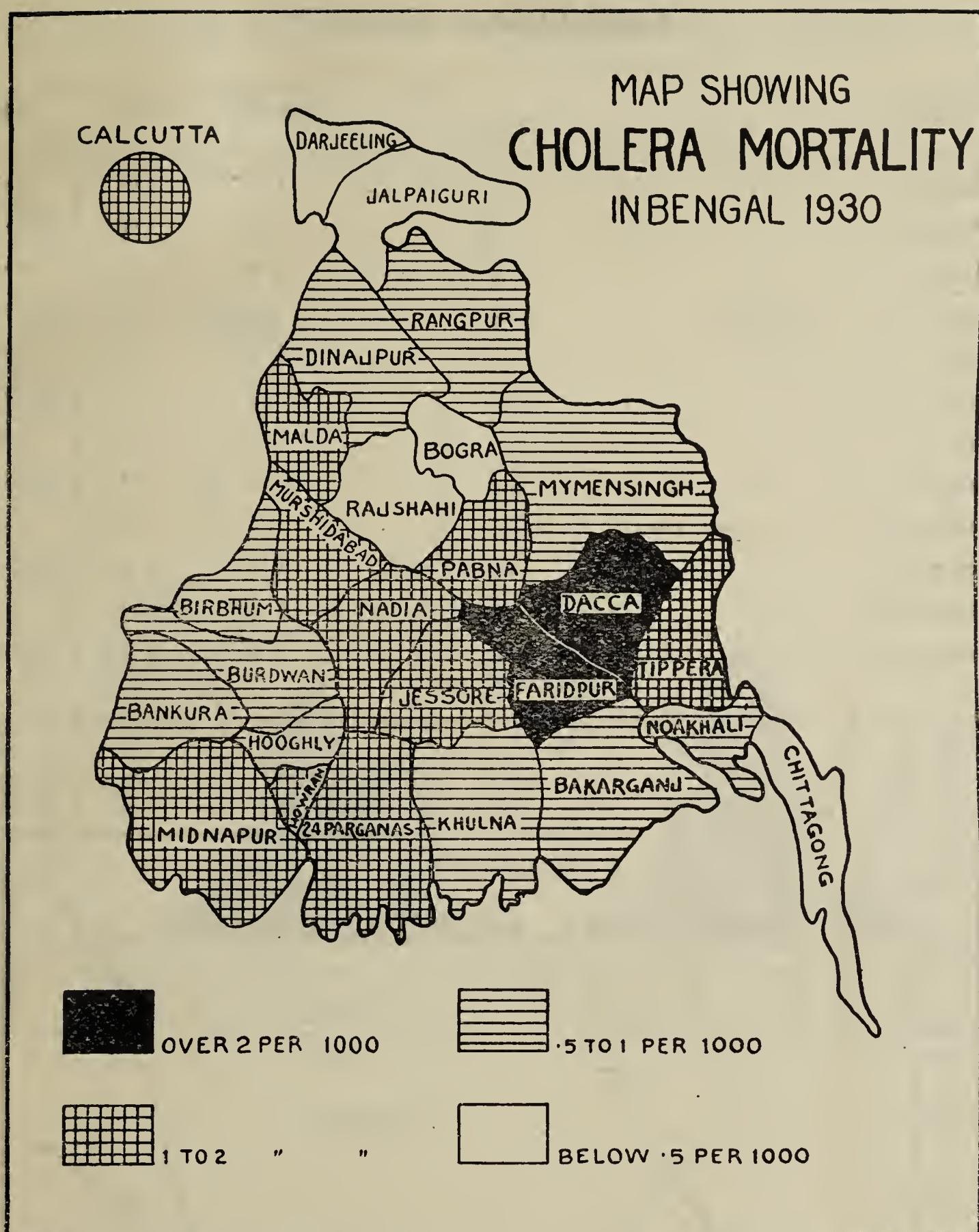
SECTION VI.

History of the Chief Diseases.

Cholera.

27. **General prevalence.**—Cholera accounted for 54,963 deaths giving a death-rate of 1·2 per mille in 1930 against 81,090 deaths and a rate of 1·7 in 1929, showing a reduction of 29·4 per cent. It was 33·3 per cent. less than the average of the previous quinquennium (1·8). 5·3 per cent. of the total deaths in the province in 1930 were due to cholera. Deaths from cholera were reported from 617 out of 654 circles of registration and from 13,183 out of 84,748 villages in the province against 619 out of the 642 and 19,643 out of 84,748 respectively in the previous year.

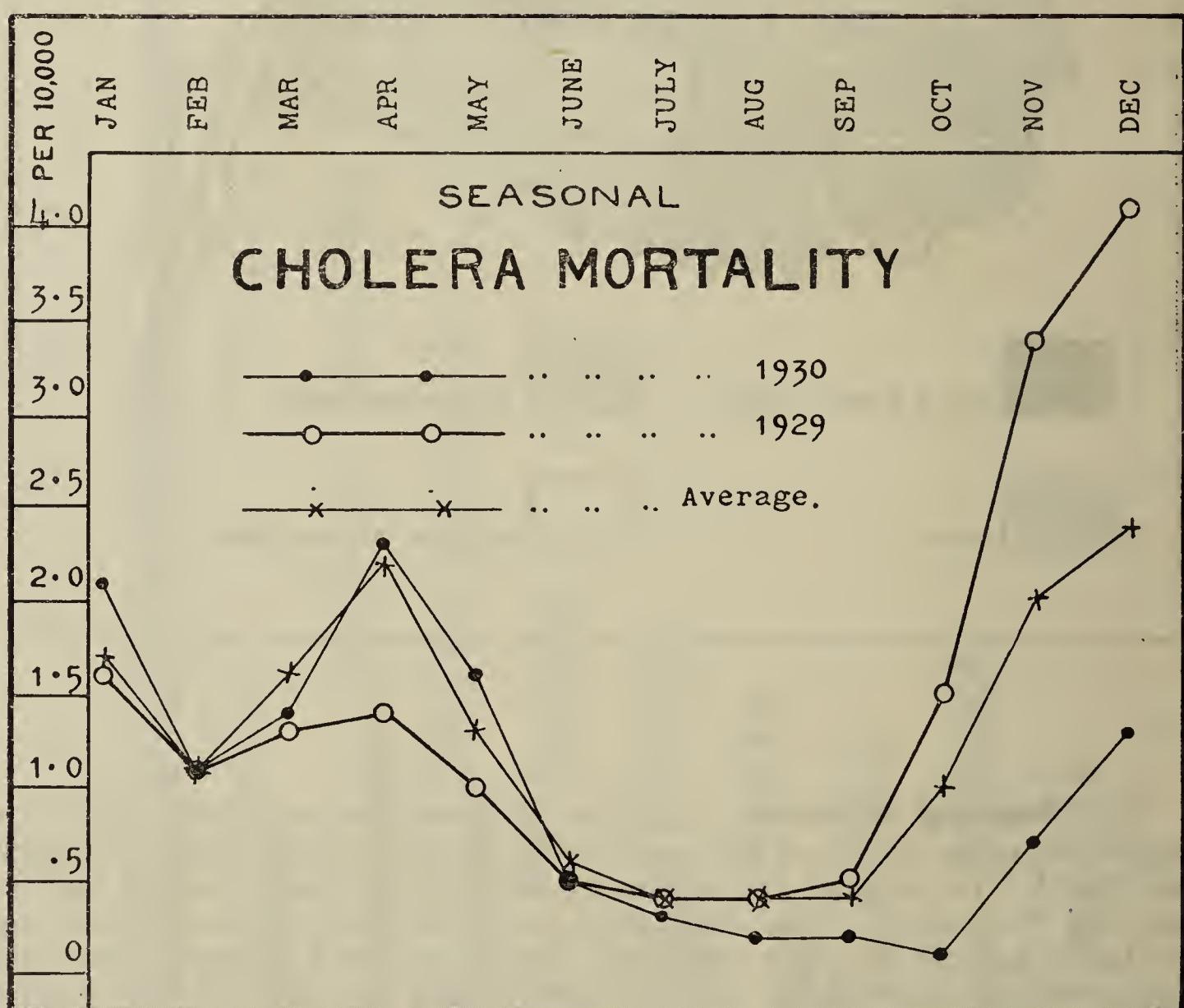




28. **Seasonal incidence.**—(a) After its usual rise in October 1929 the death-rate came down in February 1930 to start rising again in March and April. It reached its minimum during the rainy season to rise again in November. The death-rate was lower in every month during the latter half of the year compared with that of the previous year and the preceding decennium. In January, April and May it was higher than the other two rates, while in February it was the same. In March it was less than the latter but more than the former rate. In June it was the same as in the previous year, but less than the average of the previous 10 years.

Seasonal Cholera mortality.

Months.			Average, 1920-29.	1929.	1930.
January	1.7	1.6
February	1.1	1.1
March	1.6	1.3
April	2.2	1.4
May	1.3	1.0
June6	.5
July4	.4
August4	.4
September4	.5
October	1.0	1.5
November	2.0	3.4
December	2.4	4.1



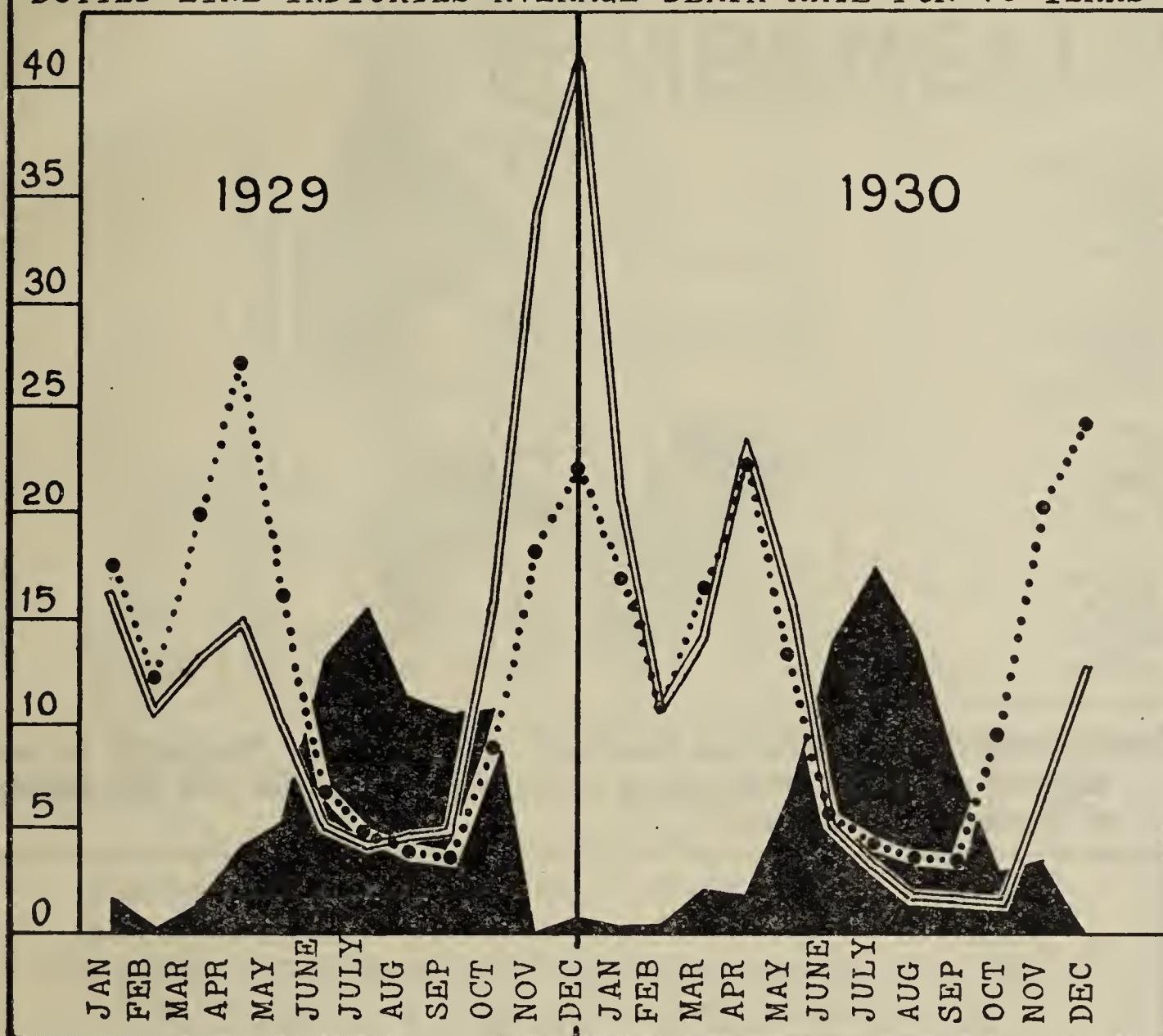
(b) The diagram below shows the relationship between cholera deaths and rainfall in Bengal.

CHOLERA MORTALITY & RAINFALL BY MONTHS

CHOLERA DEATHS (PER 1.AKH OF POPULATION)

RAINFALL (INCHES) IN BLACK

DOTTED LINE INDICATES AVERAGE DEATH RATE FOR 10 YEARS

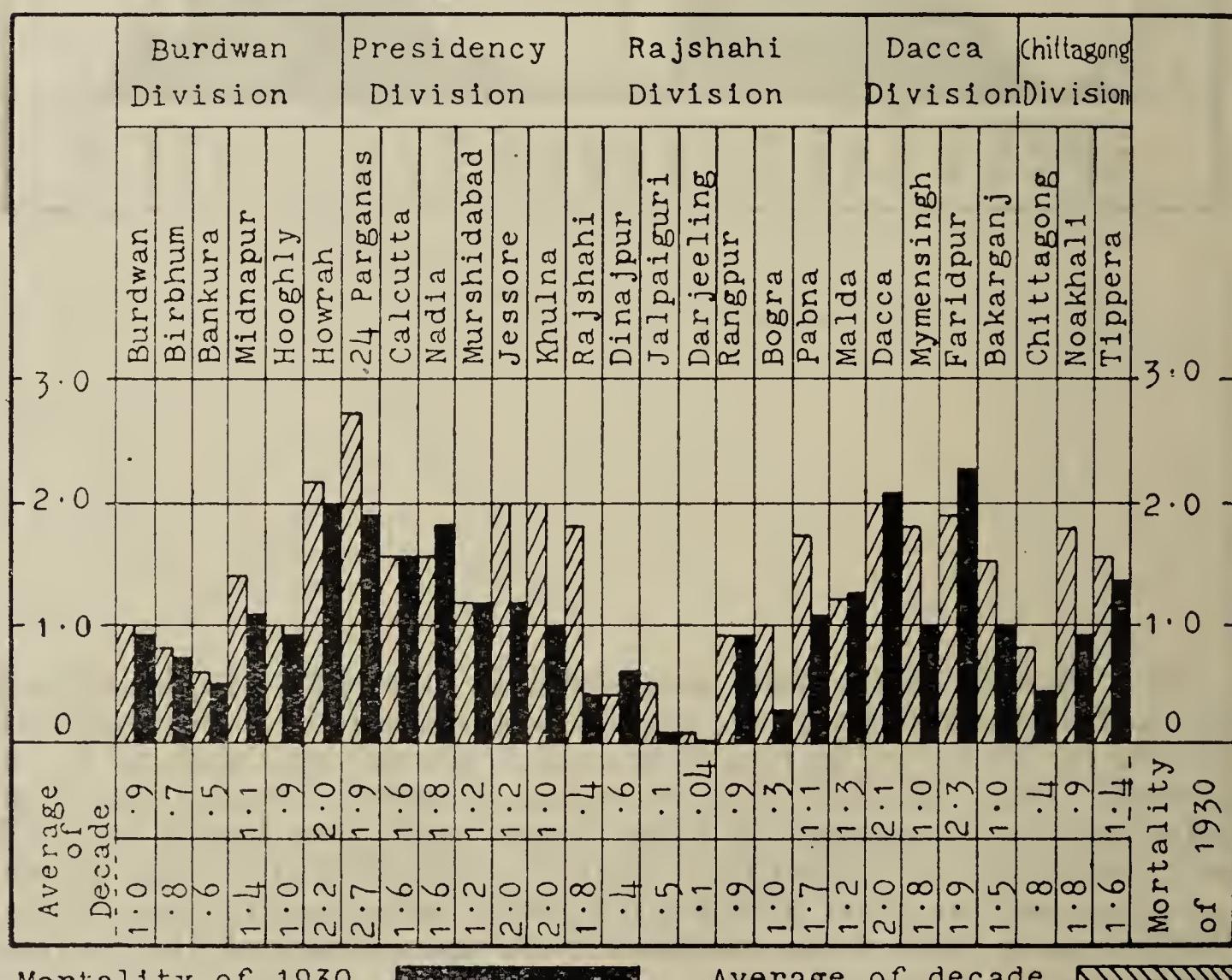


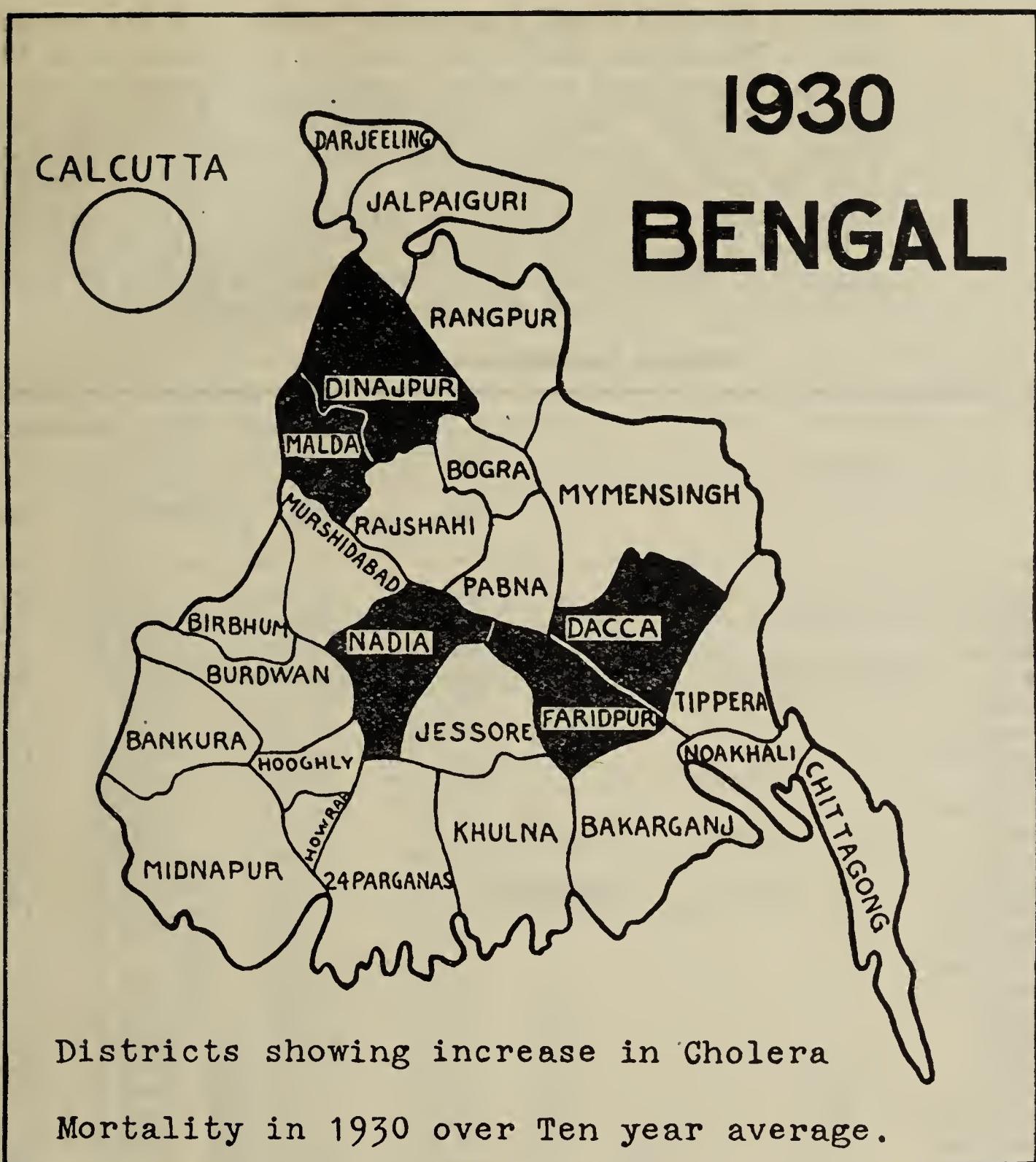
29. **Cholera deaths and death-rates in districts.**—Eight districts returned death-rates above the provincial average (1·2). Faridpur with its rate of 2·3 per mille topped the list, followed by Dacca (2·1) and Howrah (2·0). 12 other districts returned rates between 1 and 2 per mille and the remaining 12 below 1 per mille, the lowest rate 0·04 being registered in Darjeeling. With the exception of 8 which showed variations, all the other districts registered reductions in their cholera death-rates in 1930 when compared with the average of the previous decade and the preceding year.

Cholera death-rates per mille.

Districts.	Decennial average.	1930.	Increase+ or decrease-	Percentage of increase+ or decrease -	1929.	Increase+ or decrease-	Percentage of increase+ or decrease -
24-Parganas	2.7	1.9	-0.8	-29.6	2.5	-0.6	-24.0
Howrah	2.2	2.0	-0.2	-9.1	2.6	-0.6	-23.1
Khulna	2.1	1.0	-1.1	-52.4	3.8	-2.8	-73.7
Jessore	2.0	1.2	-0.8	-40.0	3.5	-2.3	-65.7
Dacca	2.0	2.1	+0.1	+5.0	2.1	+0	+0
Faridpur	1.9	2.3	+0.4	+21.0	2.9	-0.6	-20.7
Mymensingh	1.8	1.0	-0.8	-44.5	1.1	-0.1	-9.1
Rajshahi	1.8	0.4	-1.4	-77.8	2.3	-1.9	-82.6
Noakhali	1.8	0.9	-0.9	-50.0	1.6	-0.7	-43.8
Pabna	1.7	1.1	-0.6	-35.3	2.2	-1.1	-50.0
Calcutta	1.6	1.6	+0	+0	2.4	-0.8	-33.4
Nadia	1.6	1.8	+0.2	+12.5	3.5	-1.7	-48.6
Tippera	1.6	1.4	-0.2	-12.5	1.9	-0.5	-26.3
Bakarganj	1.5	1.0	-0.5	-33.4	1.2	-0.2	-16.7
Midnapur	1.4	1.1	-0.3	-21.4	1.5	-0.4	-26.7
Murshidabad	1.2	1.2	+0	+0	1.3	-0.1	-7.7
Malda	1.2	1.3	+0.1	+8.3	1.8	-0.5	-27.8
Bogra	1.1	0.3	-0.8	-72.7	0.6	-0.3	-50.0
Hooghly	1.0	0.9	-0.1	-10.0	1.2	-0.3	-25.0
Burdwan	1.0	0.9	-0.1	-10.0	1.3	-0.4	-30.8
Rangpur	1.0	0.9	-0.1	-10.0	0.9	+0	+0
Birbhum	0.8	0.7	-0.1	-12.5	0.9	-0.2	-22.2
Chittagong	0.8	0.4	-0.4	-50.0	0.7	-0.3	-42.9
Bankura	0.6	0.5	-0.1	-16.7	1.2	-0.7	-58.3
Jalpaiguri	0.5	0.1	-0.4	-80.0	0.2	-0.1	-50.0
Dinajpur	0.4	0.6	+0.2	+50.0	0.7	-0.1	-14.3
Darjeeling	0.1	0.04	-0.06	-60.0	0.1	-0.06	-60.0

Graph showing the Relative Intensity of Cholera Mortality in each district of Bengal Presidency during the year 1930 and the average of Decade 1920 to 1929.





30. **Cholera in towns and rural areas.**—3,837 deaths from cholera occurred in the towns in 1930 and 51,126 in the rural areas yielding death-rates of 1·2 per mille for each of these areas respectively against 2·0 and 1·7 in 1929. The town rate was thus less by 40·0 per cent. and the rural rate by 29·4 per cent. compared with the previous year. 36 towns returned death-rates for cholera above the urban average. The highest death-rate 3·2 per mille was registered in Noakhali followed by 3·1 in Bansberia and 3·0 in Kandi. 12 other towns recorded rates between 2 and 3, 40 between 1 and 2 and 50 below 1 per mille. No death from cholera was reported from 13 towns.

31. **Preventive measures.**—The following anti-cholera measures were adopted:—

(a) **Inoculation.**—1,184,415 cubic centimetres of anti-cholera vaccine were issued in 1930 against 1,718,610 cubic centimetres in the previous year. The total number of inoculations performed was 1,021,541 against 1,566,150 in 1929. The subjoined table shows the number of inoculations performed in the various districts and the

cholera deaths for the year under review and the previous year. The cholera deaths decreased in every district in 1930 (except Dacca) and so did the number of inoculations in all but 6. Of the latter, Darjeeling and Chittagong Hill Tracts, which reported no inoculation in the previous year, had 70 and 1,381, respectively, to their credit in the year under review. Dacca was the only district which registered a higher number of deaths in 1930 but in spite of this, the number of inoculations performed there was less by about 13 per cent. compared with the previous year.

Cholera Inoculations and deaths.

Districts.	Inoculations reported.		Cholera deaths.	
	1929.	1930.	1929.	1930.
Burdwan	49,363	15,145	1,825	1,360
Birbhum	17,651	13,861	794	600
Bankura	25,193	8,843	1,188	570
Midnapur	148,577	106,216	3,917	2,864
Hooghly	24,086	19,773	1,262	997
Howrah	32,851	21,539	2,552	2,014
24-Parganas	101,712	59,007	6,065	4,736
Nadia	81,761	22,863	5,293	2,638
Murshidabad	48,127	31,684	1,655	1,516
Jessore	97,591	24,857	6,032	2,089
Khulna	114,249	21,896	5,447	1,377
Rajshahi	71,174	9,001	3,389	648
Dinajpur	23,036	23,282	1,147	1,079
Jalpaiguri	8,068	3,642	221	134
Darjeeling .. .. ..	....	70	20	11
Rangpur	27,491	48,897	2,347	2,324
Bogra	12,167	15,926	592	328
Pabna	30,753	23,569	3,040	1,491
Malda	39,368	16,970	1,800	1,258
Dacca	86,966	75,833	6,498	6,524
Mymensingh	66,536	112,148	5,252	4,720
Faridpur	84,200	82,886	6,535	5,251
Bakarganj	90,280	89,529	3,095	2,713
Chittagong	35,097	29,514	1,080	710
Chittagong Hill Tracts .. .. ..	..	1,381	..	..
Tippera	132,892	68,915	5,113	3,986
Noakhali	101,429	67,144	2,358	1,270
Kumbh Mela .. .. ..	..	6,500	..	..
Haj pilgrims .. .. ..	..	650	..	..
Total ..	1,566,150	1,021,541	81,090	54,963

(b) *Disinfection of water supplies, etc.*—82,100 wells and 28,840 tanks were disinfected in addition to 2,982 river ghats and other water-sources, 8,650 houses, 22dobas and 742 latrines.

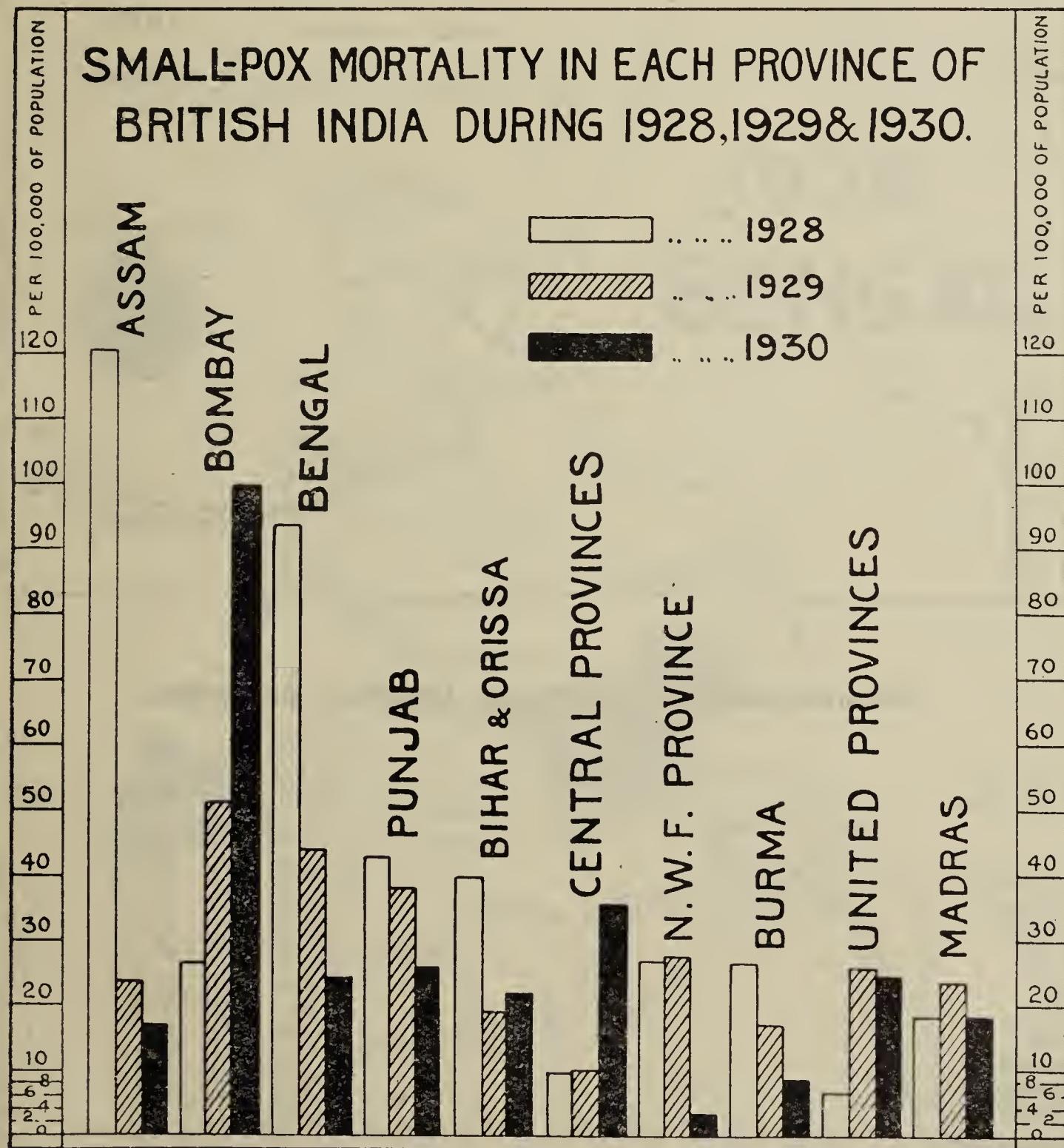
(c) Inoculation of pilgrims to the Puri Rathjatra, Kumbh and Ganga Sagar melas and the Haj.

(d) Lantern lectures and magic lantern demonstrations together with the distribution of leaflets and posters.

(e) Help was given by the medical staff under the Bengal Public Health Department to the local bodies whenever possible and practicable.

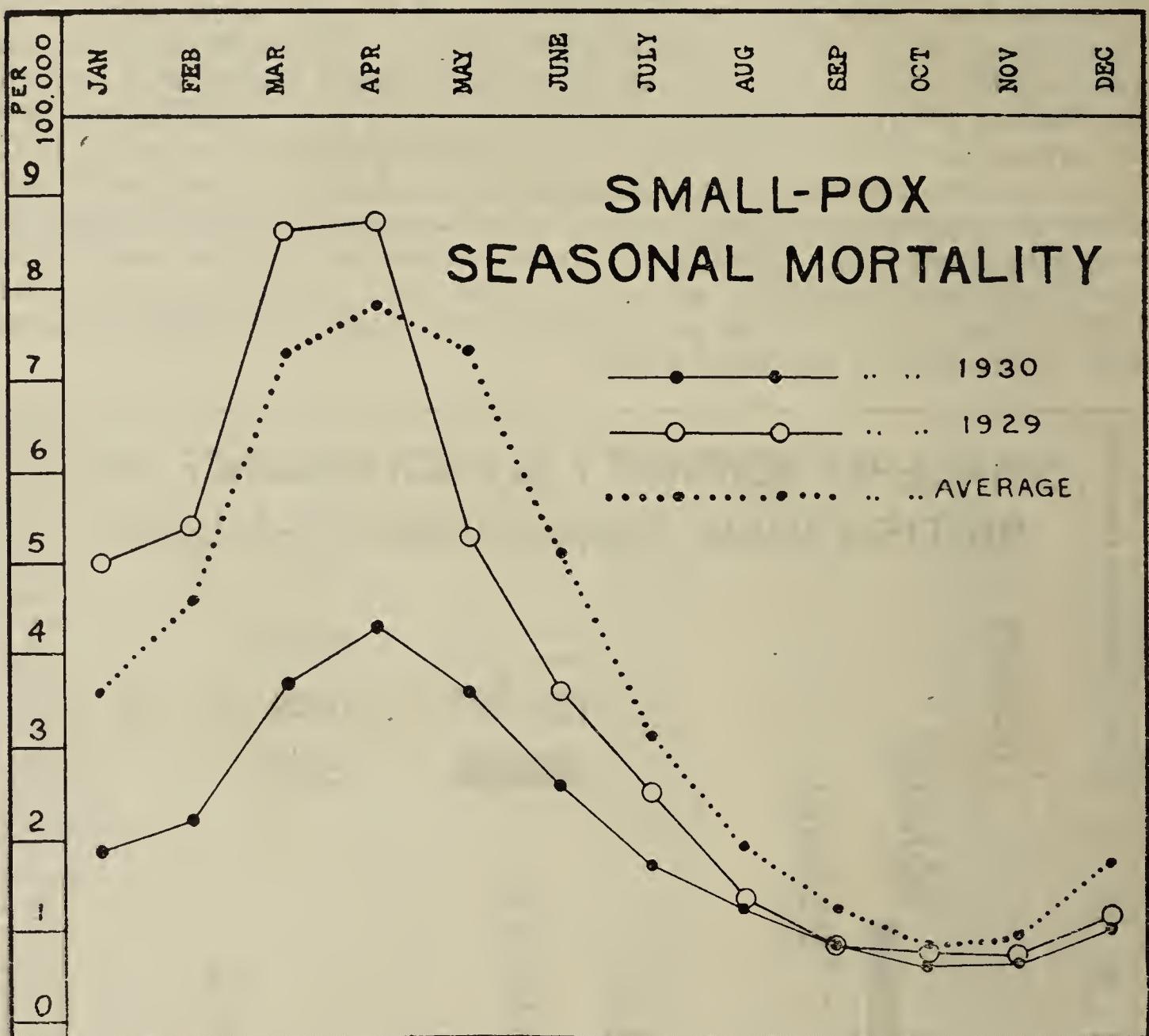
Smallpox.

32. General Prevalence.—Smallpox claimed 11,268 victims in the province in 1930 against 20,407 in 1929. The death-rate was '2 per mille compared with '4 in the previous year and '6 the mean of the previous five years showing a reduction of 50 per cent. against the former and 66·7 per cent. against the latter. The outbreak this year was the aftermath of the last quinquennial epidemic that started towards the close of 1924, and Bengal will be fortunate if these cases do not form the preliminary to the pandemic which is apprehended to occur by 1932. It is therefore necessary that the local bodies should not yet relax their efforts in preparing the population in their various jurisdictions for the oncoming onslaught. Smallpox was responsible for 1·1 per cent. of the total provincial mortality against 1·9 per cent. in the previous year. 4,565 villages out of 84,748 were affected with smallpox in 1930 compared with 5,584 in the previous year.



33. Seasonal incidence.—Starting in December 1929 the cases began to increase till the maximum was reached in April when the

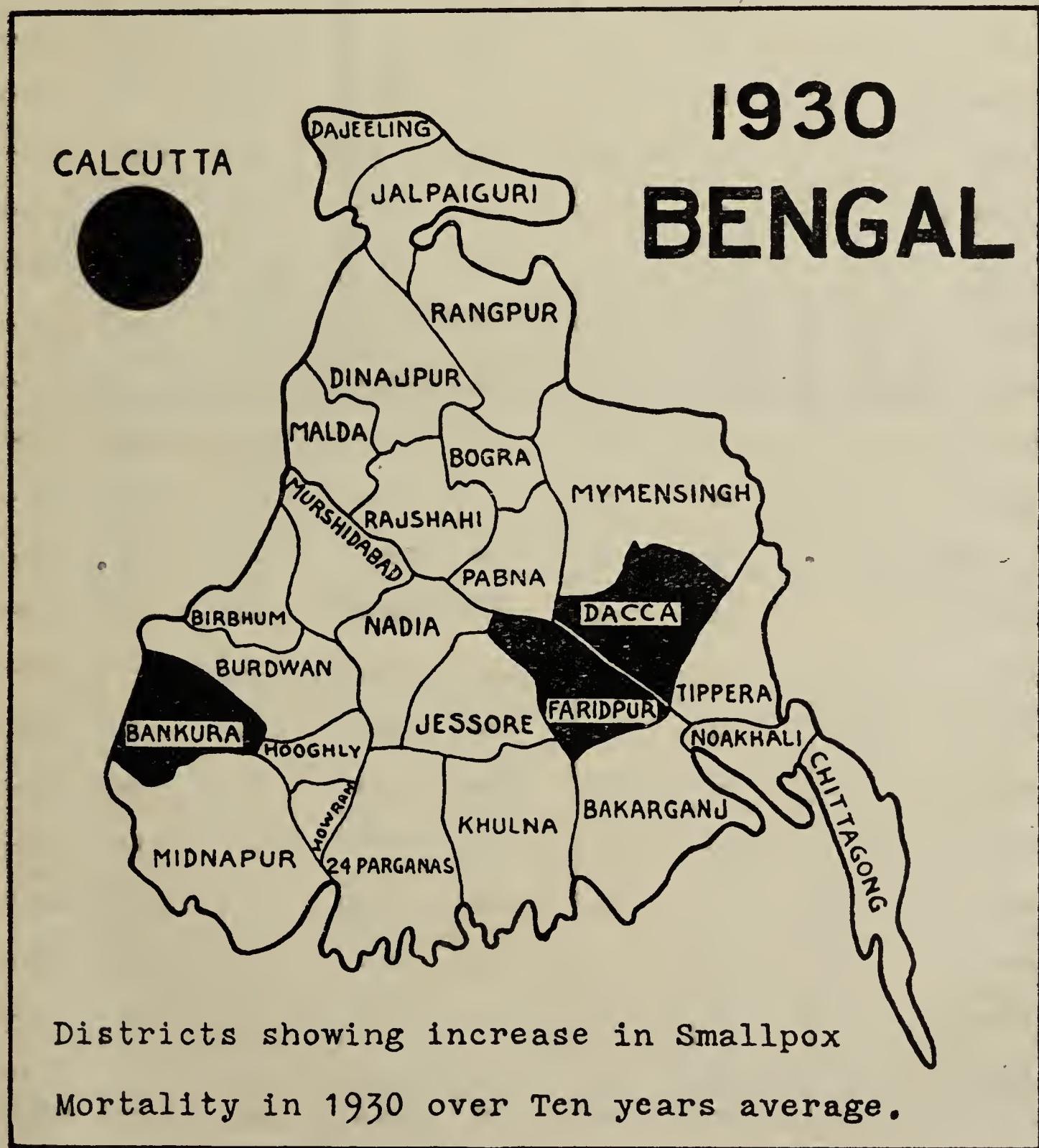
descent began, resulting in a period of comparative quiescence during September, October and November. The highest mortality rate 4·3 per 100,000 was obtained in April and the lowest .6 in October and November. Compared with that for 1929 and the average of the previous decade the death-rate was less in every month of the year 1930.



Seasonal Smallpox mortality per 100,000 of population.

Months.	Average, 1920-29.	1929.	1930.
January	3.6	5.0	1.9
February	4.6	5.4	2.2
March	7.3	8.6	3.7
April	7.8	8.7	4.3
May	7.3	5.3	3.6
June	5.1	3.6	2.6
July	3.1	2.5	1.7
August	1.9	1.3	1.2
September	1.2	1.0	.8
October	.8	.7	.6
November	.9	.7	.6
December	1.7	1.1	1.0
Total	45.4	43.9	24.2

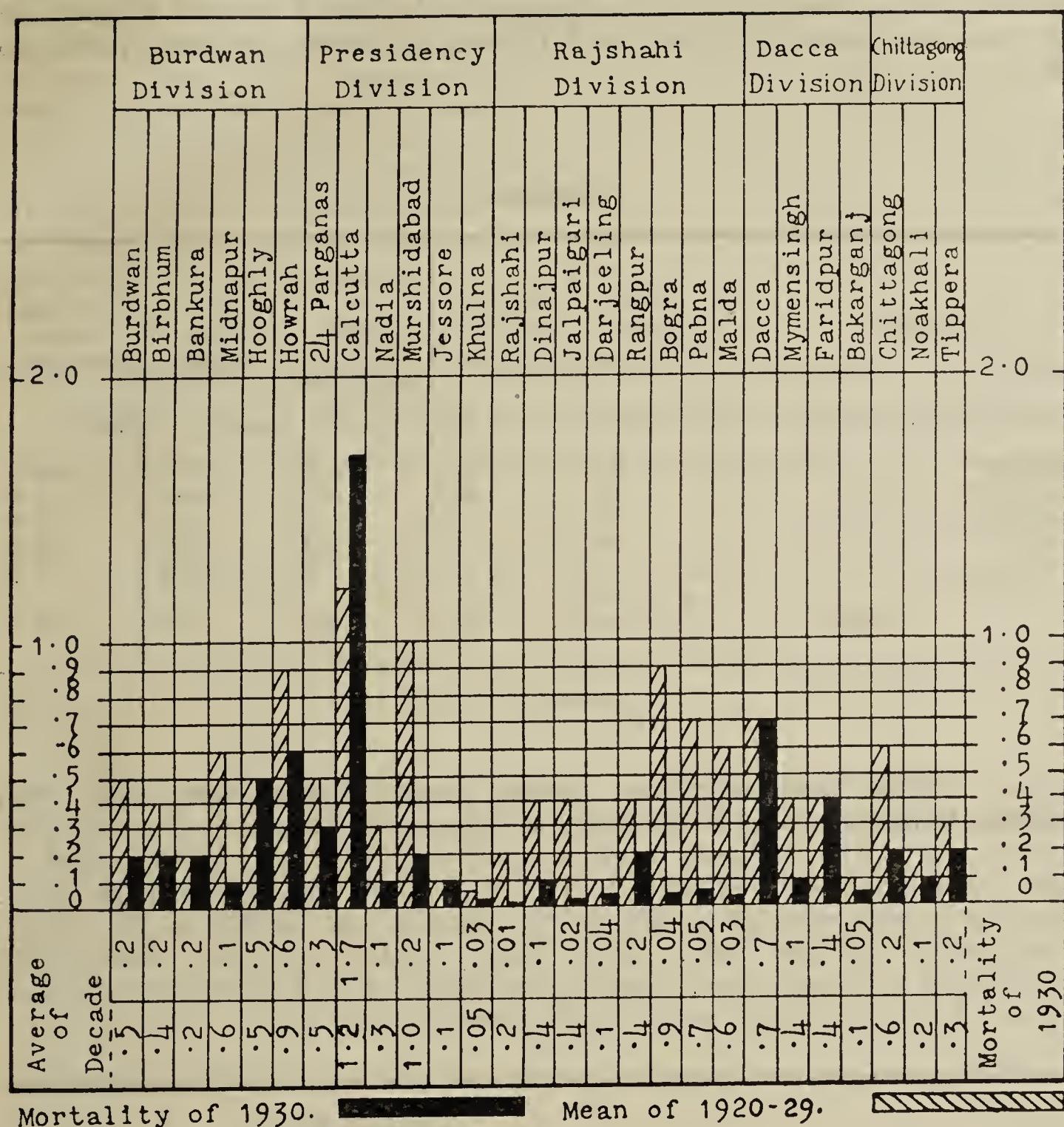
34. Smallpox in districts.—7 districts out of 27 yielded death-rates above the provincial average for smallpox ($\cdot 24$ per mille). Calcutta had the worst of the smallpox in 1930. Its death-rate $1\cdot 69$ per mille was higher than that of the previous year as well as the average of the preceding decade. 15 districts had rates between $1\cdot 0$ and $\cdot 1$ per mille, while in 11 the rate was below $\cdot 1$ per mille, Rajshahi with its $\cdot 01$ standing at the bottom of the list. Compared with the previous year there was a reduction in all the districts but 11; and of these 11, with the exception of Noakhali and Bogra all the rest are contiguous districts situated in the Burdwan and Presidency Divisions. The only two districts that had higher death-rates than both the previous year and the preceding decennium were Calcutta and Bankura.



Smallpox death-rates per mille.

District.	Average of decade, 1920-29.	1930.	Increase (+) or decrease (-).	Percent- age of increase (+) or decrease (-).	1929.	Increase (+) or decrease (-).	Percent- age of increase (+) or decrease (-).
Calcutta ..	1.17	1.69	+ .52	+ 44.4	.36	+ 1.33	+ 369.4
Murshidabad ..	.96	.17	- .79	- 82.3	.56	- .39	- 69.7
Howrah ..	.87	.60	- .27	- 31.1	.19	+ .41	+ 215.8
Bogra ..	.87	.04	- .83	- 95.4	.04	+ 0	+ 0
Pabna ..	.72	.05	- .67	- 93.1	.11	- .06	- 54.6
Dacca ..	.72	.73	+ .01	+ 1.4	1.66	- .93	- 56.0
Midnapur ..	.60	.11	- .49	- 81.7	.07	+ .04	+ 57.1
Malda ..	.60	.03	- .57	- 95.0	.19	- .16	- 84.2
Chittagong ..	.59	.18	- .41	- 69.5	.77	- .59	- 76.6
Hooghly ..	.53	.53	+ 0	+ 0	.29	+ .24	+ 82.7
24-Parganas ..	.52	.28	- .24	- 46.2	.16	+ .12	+ 75.0
Burdwan ..	.51	.25	- .26	- 51.0	.34	- .09	- 26.5
Birbhum ..	.45	.19	- .26	- 57.8	.09	+ .10	+ 111.1
Dinajpur ..	.43	.11	- .32	- 74.4	.48	- .37	- 77.1
Faridpur ..	.41	.45	+ .04	+ 9.7	1.59	- 1.14	- 71.7
Rangpur ..	.39	.19	- .20	- 51.3	.34	- .15	- 44.1
Mymensingh ..	.39	.13	- .26	- 66.7	.46	- .33	- 71.7
Jalpaiguri ..	.37	.02	- .35	- 94.6	.04	- .02	- 50.0
Tippera ..	.30	.21	- .09	- 30.0	.68	- .47	- 69.1
Nadia ..	.29	.09	- .20	- 69.0	.24	- .15	- 62.5
Rajshahi ..	.24	.01	- .23	- 95.8	.30	- .29	- 96.7
Noakhali ..	.19	.09	- .10	- 52.6	.08	+ .01	+ 12.5
Bankura ..	.18	.23	+ .05	+ 27.8	.03	+ .20	+ 666.5
Jessore ..	.15	.08	- .07	- 46.7	.02	+ .06	+ 300.0
Darjeeling ..	.08	.04	- .04	- 50.0	.47	- .43	- 91.5
Bakarganj ..	.06	.05	- .01	- 16.7	.12	- .07	- 58.3
Khulna ..	.05	.03	- .02	- 40.0	.01	+ .02	+ 200.0

Graph showing the Relative Intensity of Smallpox Mortality in each district of Bengal Presidency during the year 1930 and the average of the decade 1920-29.



35. Smallpox in towns and rural areas.—3,150 deaths from smallpox were registered in the towns of Bengal in 1930 and 8,118 in the rural areas against 1,003 and 19,404 respectively in 1929. The respective death-rates were 1·91 and ·19 against ·32 and ·44 in 1929, showing an increase of 215·6 per cent. in towns and a decrease of 56·8 per cent. in the rural areas. 18 towns recorded death-rates higher than the urban average, the chief of these being Khardah (5·6), Bishnupur (3·9), Sonamukhi (2·6), Hooghly-Chinsura (2·6), North Barrackpur (2·6), Bhadreswar (2·3) and Titagarh (2·1). Of these the first and the last four are industrial centres with floating populations drawn from up-country which come to Bengal unprotected and offer the greatest resistance when asked to take revaccination. Among the towns that recorded rates below the urban average, 53 returned rates between 1·0 and 0·1 and 4, viz., Asansol, Budge-Budge, Rajshahi and Darjeeling, had ·04 per mille each to their credit. 43 towns reported no death from

smallpox. Calcutta was responsible for 57·7 per cent. of the total deaths in all the other towns of Bengal. The table appended below shows in particular that so far as urban areas are concerned Burdwan Division with an average of 32·8 deaths per town and with about 50 per cent. of the total urban deaths from smallpox was the worst affected division in the province, while Rajshahi and Chittagong were practically free in 1930.

Smallpox.

Divisions.	Total number of towns.	Number of towns infected.	Number of deaths from smallpox.	Percentage of deaths.	Average deaths per town.
Burdwan	29	20	657	49·3	32·8
Presidency	48	29*	437	32·8	15·1
Rajshahi	15	7	26	2·0	3·7
Dacca	20	15	204	15·3	13·6
Chittagong	6	3	8	·6	2·7
Total ..	118	74	1,332	100	18·0

*Excluding Calcutta.

36. Deaths from smallpox among infants below one year and children between one and ten years of age.—435 infants below one year of age and 1,172 children between one and 10 years of age died in 1930 from smallpox against 1,871 and 5,009 respectively in 1929, showing a reduction of 1,436 in the former and 3,837 in the latter community. 3·9 per cent. of the total deaths occurred among the former and 10·4 per cent. among the latter in the year under review against 9·1 and 24·5 per cent. in the previous year.

Divisions.	Smallpox deaths.		Total smallpox deaths at all ages.
	Under one year.	Between 1 and 10 years.	
Burdwan	44	96	2,232
Presidency (including Calcutta)	37	129	3,056
Rajshahi	15	49	889
Dacca	283	792	4,063
Chittagong	56	106	1,028
Total ..	435	1,172	11,268

So far as the infants are concerned, the percentage of smallpox deaths to total increased in Birbhum, Hooghly, Rajshahi and Bogra. All the

other districts show reduction, though this is negligible in Rangpur, Faridpur and Chittagong districts; the rate in the latter however is appalling and shows gross neglect of primary vaccination. As regards children between one and 10 years of age, it is again the same four districts in which the percentage is increased, pointing to carelessness in revaccination. Thus it is these four districts in the province that seem to have given very little attention to primary vaccination in one case and revaccination in the other, and unless the local authorities are more vigilant in future, they are very likely to be visited by a serious epidemic of smallpox at no very distant date. The percentage of children that fell victim to smallpox in Chittagong, Faridpur, Dacca and Murshidabad, although less than the previous year, is still very high and every effort should be made to reduce it still further.

Statement showing percentages of smallpox deaths among infants and children between 1 and 10 years of age to total deaths from smallpox at all ages.

Districts.	Infants.		Children between 1 and 10 years of age.	
	1929.	1930.	1929.	1930.
Burdwan	8.5	1.1	5.7	.8
Birbhum .. ..	....	4.8	....	9.1
Bankura .. ..	....	....	....	....
Midnapur	5.0	.3	17.0	3.4
Hooghly .. ..	.3	5.4	3.5	11.9
Howrah .. ..	....	....	....	....
24-Parganas	4.8	....	17.7	.3
Calcutta	10.2	1.1	26.7	5.2
Nadia .. ..	....	....	.3	....
Murshidabad	13.9	8.1	27.4	15.6
Jessore .. ..	....	....	....	....
Khulna .. ..	....	....	....	....
Rajshahi .. ..	.9	4.3	.7	13.0
Dinajpur	6.5	3.2	15.9	6.9
Jalpaiguri .. ..	....	....	....	....
Darjeeling .. ..	....	....	....	....
Rangpur	1.8	1.4	5.8	5.3
Bogra .. ..	....	2.0	....	14.3
Pabna	3.1	....	5.0	....
Malda	3.8	....	5.4	....
Dacca	16.0	8.4	42.5	19.8
Mymensingh	9.4	4.9	22.2	12.3
Faridpur	6.1	5.8	25.9	25.9
Bakarganj	15.5	....	6.0	....
Chittagong	19.8	18.5	45.0	33.8
Noakhali	4.8	....	6.4	1.4
Tippera	1.0	....	8.3	.3

37. **Anti-smallpox measures.**—In addition to vaccination which is dealt with fully in another section of this report, the usual measures of disinfection and propaganda by the Government staff and the local bodies were undertaken and actual help by the Bengal Public Health Department was given wherever necessary.

38. The following statement shows the vaccinal condition of small-pox patients treated at the various medical institutions in Bengal during 1930:—

Districts.	Type of smallpox.												Clasified according to age.			
	Total number of admissions from small-pox.	Number vaccinated as shown by presence of one or more vaccination cicatrices.	Number stated to have been successfully vaccinated but bearing no vaccination mark.	Number stated to be unvaccinated or vaccinated unsuccessfully bearing no vaccination mark.	Number previously unvaccinated but vaccinated during incubation of smallpox.	Number stated to have been successfully revaccinated.	Modified.	Discrete.	Semi-confluent.	Confluent.	Hæmorrhagic.	Under 1 year.				
Burdwan ..	8	7	1	..	..	..	..	..	..	1	..	..	..	5		
Birbhum ..	1	1	..	..	..	..	1	..	..	..	..	..	..	..
Bankura ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Midnapur ..	4	..	4	..	..	..	3	..	..	..	..	..	..	..
Hooghly ..	6	6	..	..	..	..	2	1	..	2	1	..	3	1		
Howrah ..	41	8	2	31	..	..	1	13	6	20	1	..	5	21		
24-Parganas ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Calcutta (Campbell Hospital).	450	231	57	56	13	93	16	121	131	154	28	5	18	112	172	143
Nadia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Murshidabad ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jessore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Khulna ..	3	2	1	..	..	..	2	..	..	1	..	..	..	2	1	..
Rajshahi ..	4	2	..	1	..	..	..	2	..	1	1	..	1	..	3	..
Dinajpur ..	2	1	1	..	..	..	1	..	..	..	1	..	..	..	2	..
Jalpaiguri ..	5	..	..	..	5	..	..	..	4	..	..	1	..	2	1	..
Darjeeling ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rangpur ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bogra ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pabna ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Malda ..	2	1	1	..	..	..	1	..	..	1	..	..	..	..	..	..
Dacca ..	25	13	4	6	..	2	7	3	2	11	2	..	1	2	14	8
Mymensingh ..	16	3	3	10	..	..	8	6	..	..	2	..	..	12	1	1
Faridpur ..	10	9	..	..	..	1	..	4	..	5	1	..	..	..	6	4
Bakarganj ..	4	3	..	1	..	..	..	1	..	2	1	..	..	1	1	2
Chittagong ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Noakhali ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tippera ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	581	287	74	110	14	96	42	162	139	199	39	7	25	135	228	186

Plague.

39. No case of plague was reported from any district in 1930.

Fever.

40. **General prevalence.**—Deaths from fevers in 1930 amounted to 705,066 against 713,531 in 1929. The death-rates were 15·1 for 1930, 15·3 in 1929 and 17·0 during the last quinquennium. The death-rate in the year under review was thus further reduced by 1·3 per cent. compared with the previous year and by 11·2 per cent. compared with the quinquennial average. There were slight increases under all the sub-heads except "Other fevers." The death-rates for malaria, kala-azar and measles remained the same, while those for enteric and relapsing fever increased by 9·1 and 25·0 per cent. and for other fevers reduced by 2·7 per cent. Fevers accounted for 67·5 per cent. of the total provincial mortality against 65·2 per cent. in the previous year.

Analysis of fever deaths in 1929 and 1930.

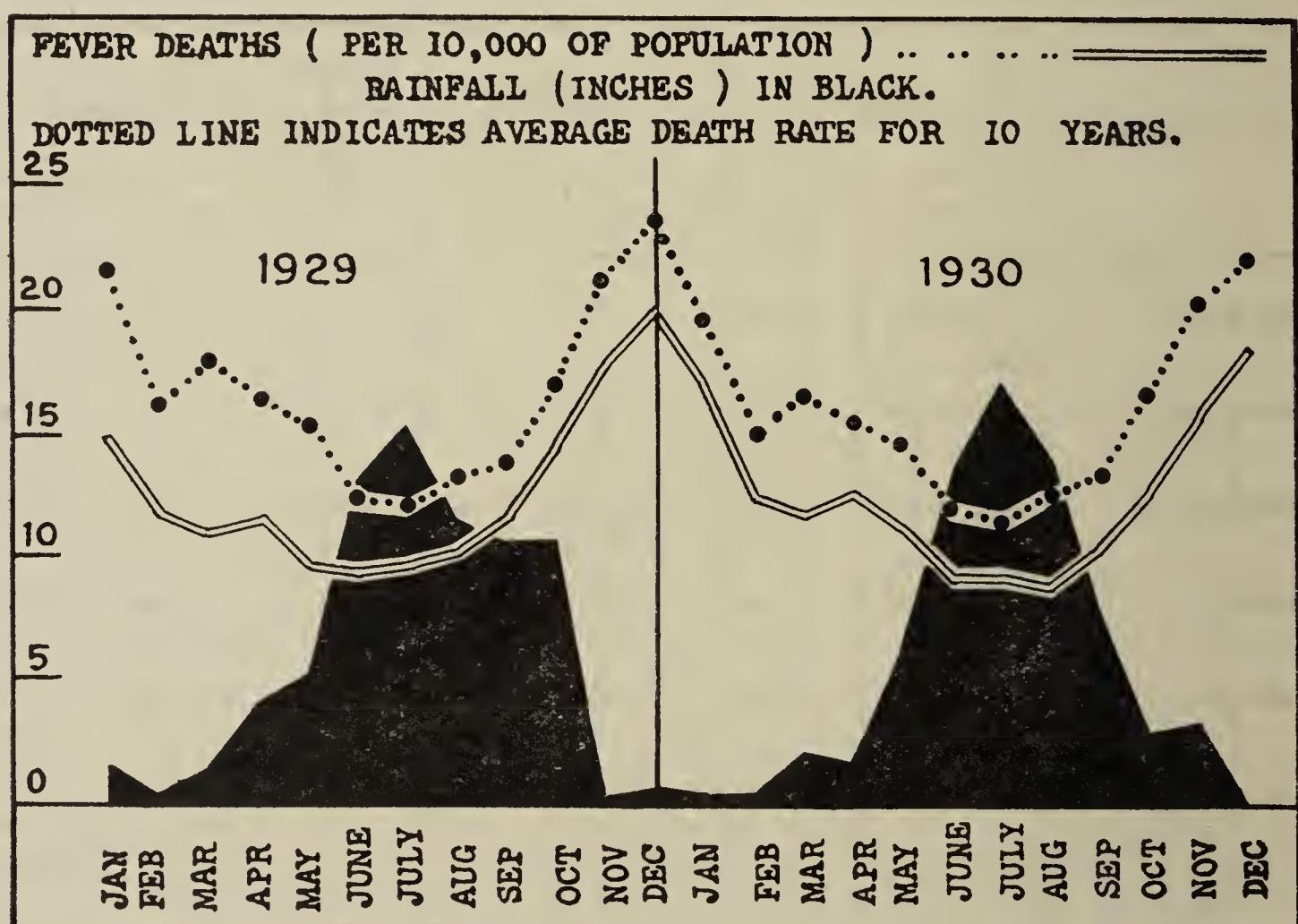
Causes.	Number.		Death rates per mille.		Percent-age of increase + or decrease in 1930.	Percentage of total fever mortality.	
	1929.	1930.	1929.	1930.		1929.	1930.
Malaria fever ..	335,414	336,879	7·2	7·2	±0	47·0	47·8
Enteric fever ..	10,487	11,144	0·22	0·24	+9·1	1·5	1·6
Relapsing fever ..	3,955	4,767	0·08	0·10	+25·0	0·6	0·7
Measles ..	2,582	2,963	0·06	0·06	±0	0·4	0·4
Kala-azar ..	10,820	10,914	0·23	0·23	±0	1·5	1·5
Other fevers ..	350,273	338,399	7·5	7·3	-2·7	49·0	48·0

41. **Seasonal incidence.**—Starting on its ascent in October 1929 it came down in February 1930 to reach its minimum in June, July and August, and rose again in September. The maximum mortality of the year was registered in December and the minimum in August. Compared with the previous year the cases showed an increase in the first half and reduction in the latter half of the year.

Fever deaths.

Months.	Average, 1920-29.	1929.	1930.	Percentages of difference between 1929 and 1930.
January	91,560	70,019	80,266	+ 14·6
February	69,873	55,476	57,993	+ 4·5
March	78,334	51,348	54,371	+ 5·9
April	72,264	53,965	59,265	+ 9·8
May	68,161	44,871	52,654	+ 17·3
June	56,490	44,212	44,839	+ 1·4
July	53,565	45,757	43,730	- 4·4
August	59,432	47,878	42,444	- 11·4
September	62,274	55,026	48,717	- 11·5
October	77,407	67,813	60,461	- 10·9
November	94,788	83,960	73,723	- 12·2
December	103,232	93,206	86,603	- 7·1

The following graph shows the relationship between fevers and the rainfall in the year 1930.



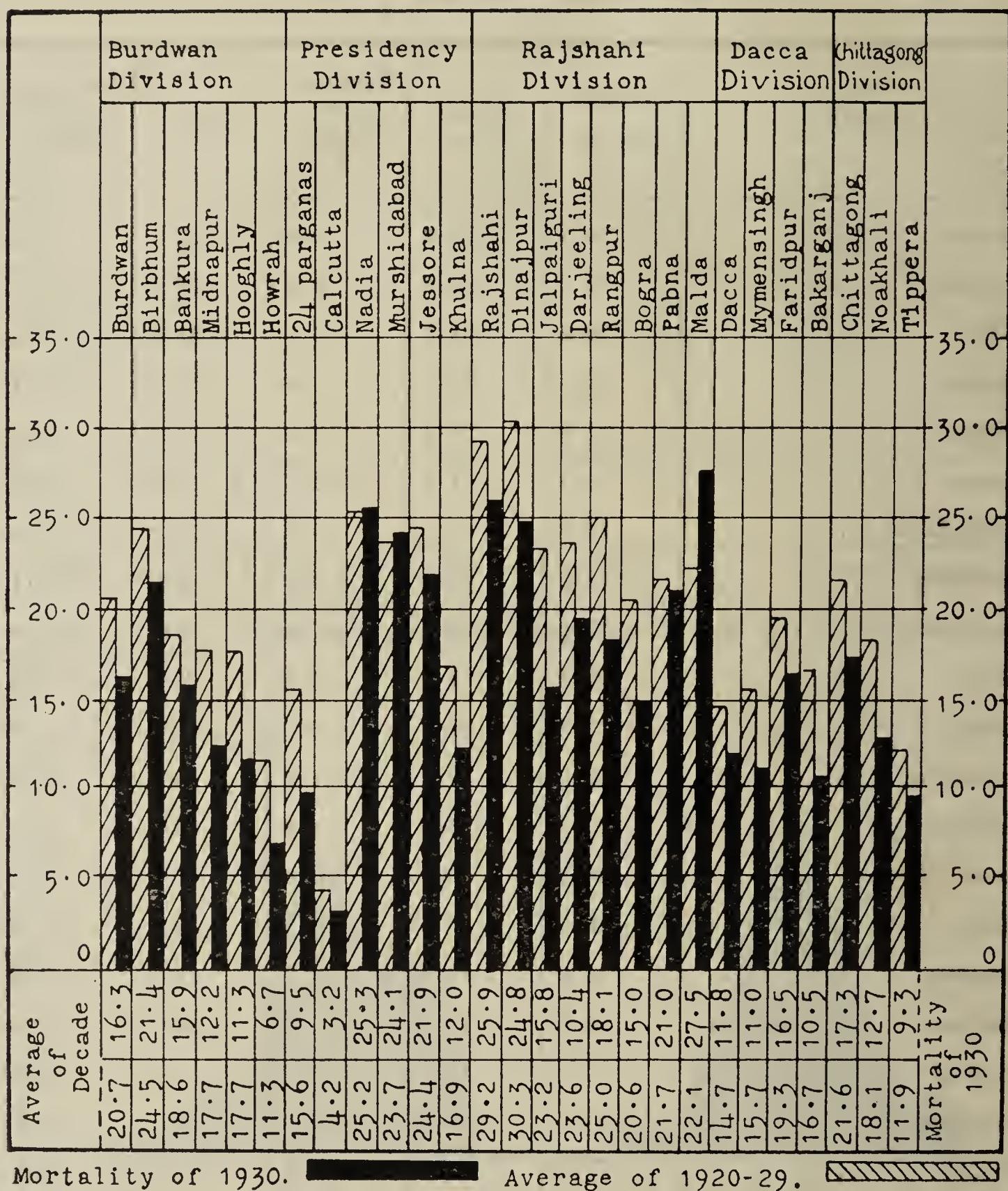
42. **Fever mortality in districts.**—15 districts registered rates above the provincial average (15·1 per mille). 8 districts headed by Malda (27·5) returned rates between 20 and 30 per mille, 15 between 10 and 20 and the remaining 4 below 10 (24-Parganas 9·5, Tippera 9·3, Howrah 6·7 and Calcutta 3·2). Compared with the previous decade 3 districts—Malda, Murshidabad and Nadia—showed higher rates. Against 1929 the death-rate was increased in 12 districts.

reduced in 13 others and remained unchanged in the remaining 2 districts of Bogra and Midnapur.

Fever death-rates per mille.

Districts.	Average of 1920-29.	1930.	Increase + or decrease —.	1929.	Increase + or decrease —.
Dinajpur	30·3	24·8	-5·5	25·1	-0·3
Rajshahi	29·2	25·9	-3·3	25·8	+0·1
Nadia	25·2	25·3	+0·1	23·7	+1·6
Rangpur	25·0	18·1	-6·9	19·4	-1·3
Birbhum	24·5	21·4	-3·1	19·6	+158
Jessore	24·4	21·9	-2·5	25·6	-317
Murshidabad	23·7	24·1	+0·4	20·3	+3·8
Darjeeling	23·6	19·4	-4·2	19·3	+0·1
Jalpaiguri	23·2	15·8	-7·4	17·3	-1·5
Malda	22·1	27·5	+5·4	22·9	+4·6
Pabna	21·7	21·0	-0·7	19·8	+1·2
Chittagong	21·6	17·3	-4·3	18·3	-1·0
Burdwan	20·7	16·3	-4·4	15·8	+0·5
Bogra	20·6	15·0	-5·6	15·0	±0·
Faridpur	19·3	16·5	-2·8	16·0	+0·5
Bankura	18·6	15·9	-2·7	15·5	+0·4
Noakhali	18·1	12·7	-5·4	14·5	-1·8
Hooghly	17·7	11·3	-6·4	10·9	+0·4
Midnapur	17·7	12·2	-5·5	12·2	±0·
Khulna	16·9	12·0	-4·9	14·1	-2·1
Bakarganj	16·7	10·5	-6·2	12·0	-1·5
Mymensingh	15·7	11·0	-4·7	11·5	-0·5
24-Parganas	15·6	9·5	-6·1	10·1	-0·6
Dacca	14·7	11·8	-2·9	11·3	+0·5
Tippera	11·9	9·3	-2·6	9·4	-0·1
Howrah	11·3	6·7	-4·6	7·1	-0·4
Calcutta	4·2	3·2	-1·0	3·7	-0·5

Graph showing the Relative Intensity of Fever Mortality in each district of Bengal Presidency during the year 1930 and the average of Decade 1920 to 1929.



MAP SHOWING
FEVER MORTALITY
IN BENGAL 1930

CALCUTTA



OVER 25 PER 1000

15 TO 20 PER 1000

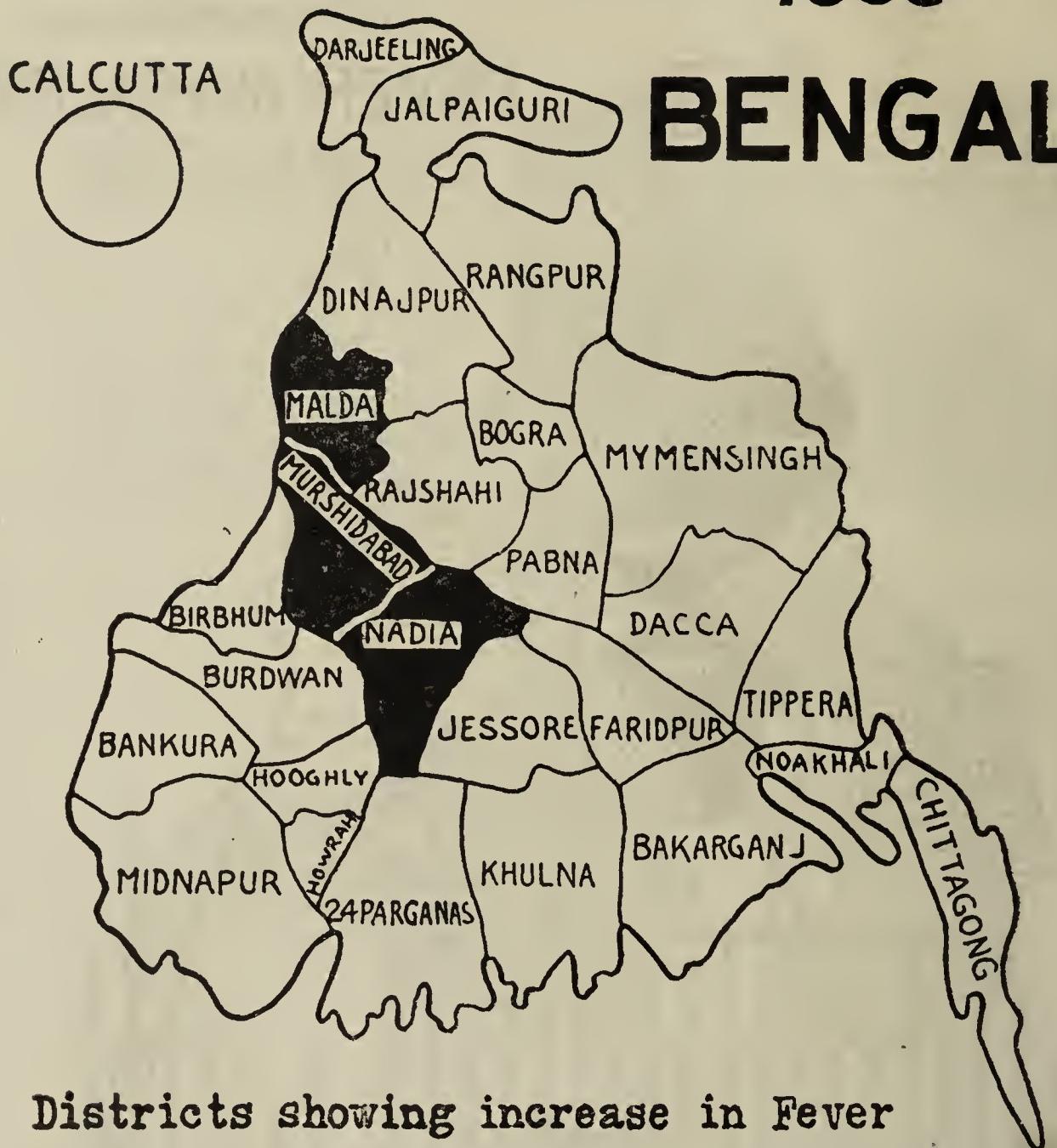
20 TO 25 "

10 TO 15 "

BELOW 10 PER 1000

1930

BENGAL



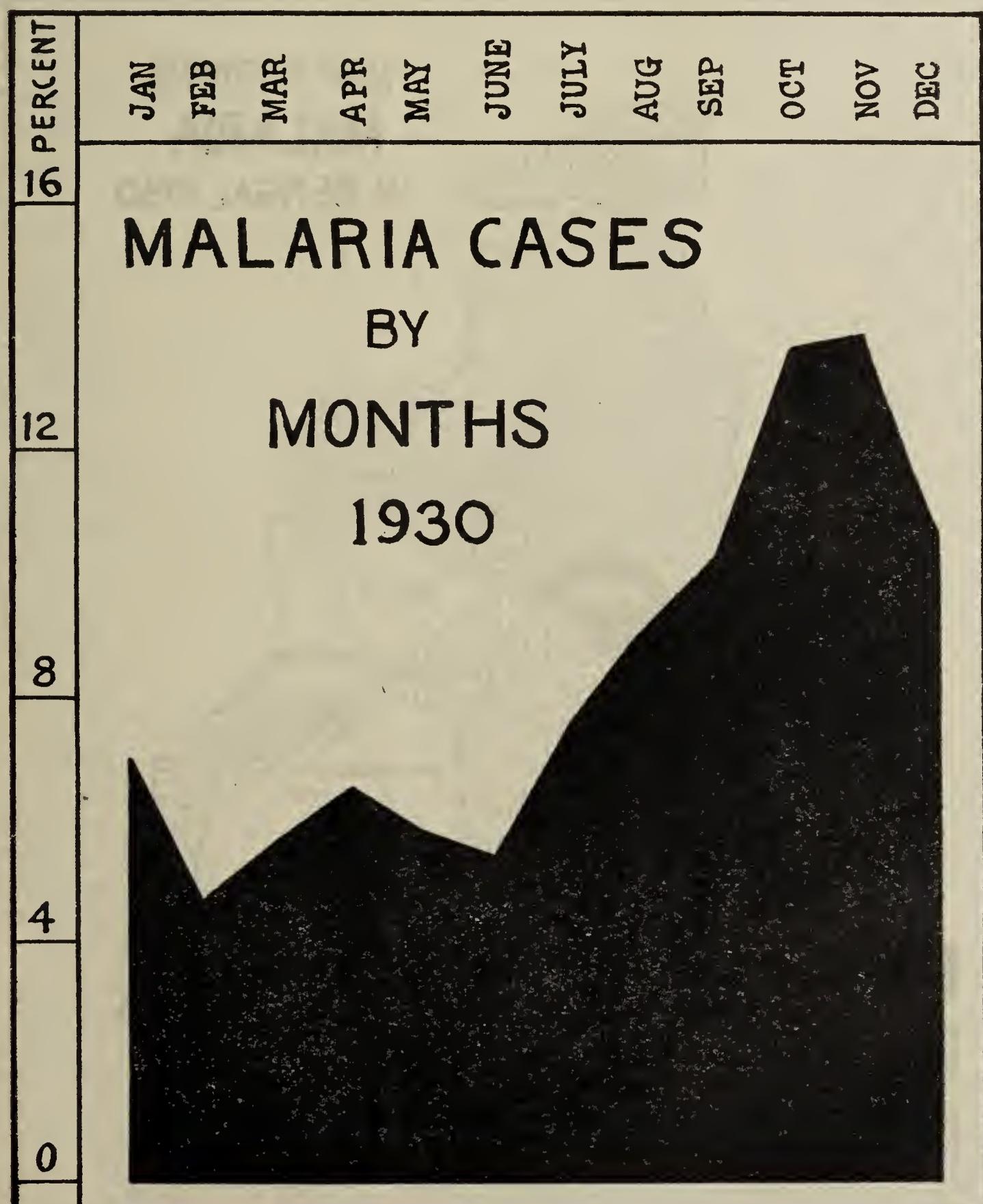
43. **Fever mortality in towns and rural areas.**—14,175 deaths were returned from towns and 690,891 from rural areas in 1930 giving death-rates of 4·5 and 15·9 per mille respectively. The corresponding numbers of deaths during 1929 were 16,070 and 697,461 and the death-rates 5·2 and 16·1 per mille. The death-rate was thus reduced by 13·5 per cent. in towns and by 1·2 per cent. in rural areas. Towns were responsible for 2·0 per cent. and the rural areas for 98·0 per cent. of the total fever mortality against 2·3 and 97·7 per cent. in the previous year. 65 towns registered death-rates above the urban average (4·5). 18 towns headed by Old Malda (24·5) returned rates above 10 per mille and the others below that, Dum-Dum recording 5 and Bhola :4 per mille.

			Municipal area.	Rural area.
Fever death rates per mille—				
1929	..	..	5·2	16·1
1930	..	..	4·5	15·9
Proportion of total deaths due to fever (per cent.)—				
1929	..	..	21·9	68·3
1930	..	..	20·8	70·8
Percentage of provincial fever mortality—				
1929	..	..	2·3	97·7
1930	..	..	2·0	98·0

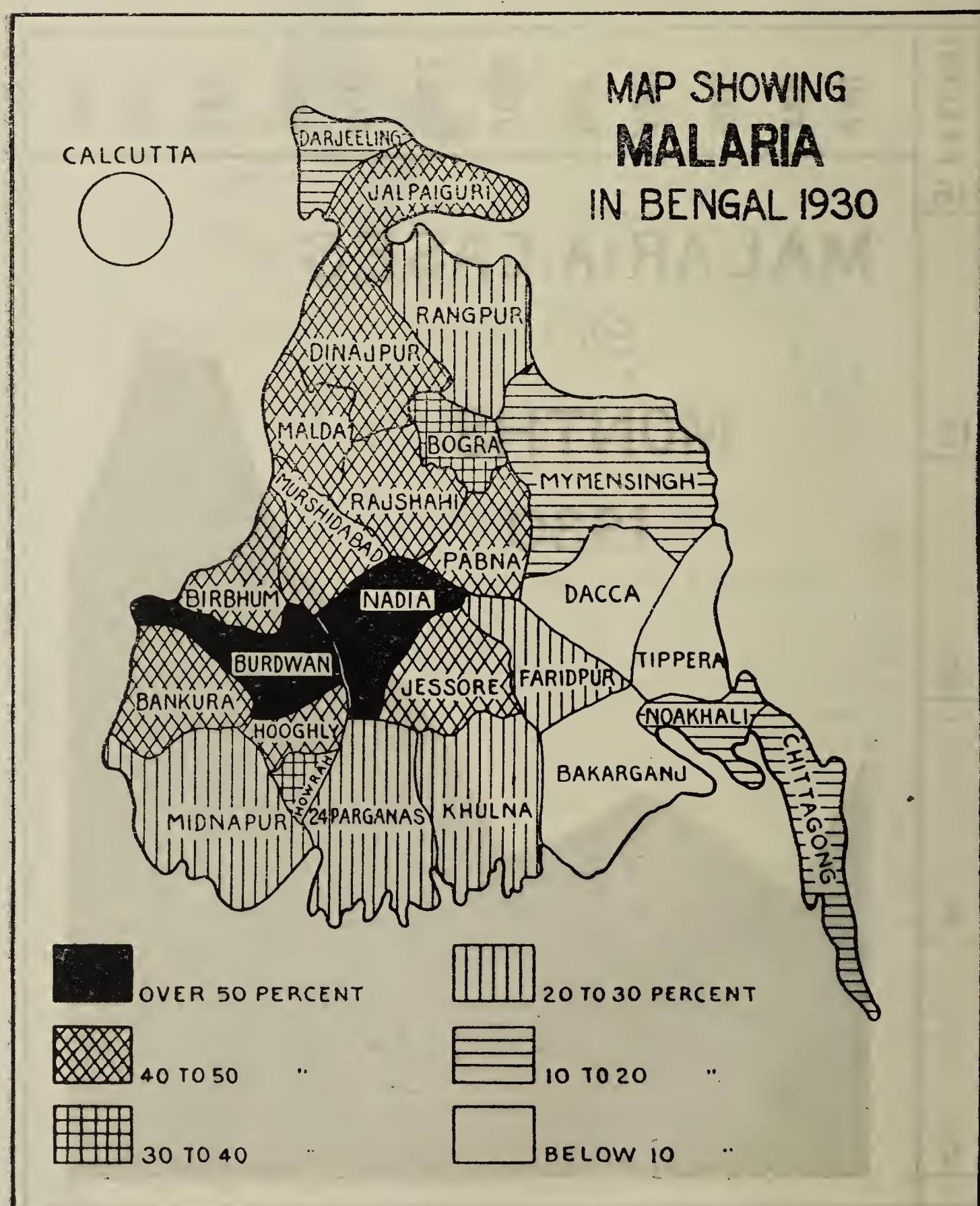
Malaria.

44. **General prevalence.**—Malaria was responsible for 336,879 deaths with a death-rate of 7·2 per mille in 1930, against 335,414 deaths and 7·2 death-rate in 1929. The number of deaths thus increased by 1,465, though the rate remained the same for both the years. It accounted for 47·8 per cent. of fever deaths and 32·3 per cent. of the total provincial mortality in 1930 against 47·0 and 30·6, respectively, in 1929.

45. **Seasonal incidence.**—The following diagram showing the proportion of new admissions from malaria to total admissions to the various medical institutions in the province month by month indicates the usual course of malaria:—



46. **Malaria by districts.**—In 15 districts the death-rate in 1930 was above the provincial average for malaria (7·2). 8 districts returned rates above 10·0 per mille, Malda standing at the top of the list (24·4). 16 others had rates between 1 and 10 per mille, while Chittagong, Calcutta and Bakarganj recorded rates below 1·0 per mille, the latter with a rate of 0·04 being the least malarious. Compared with the previous year, with the exception of 10 districts, all the others showed increased death-rates from malaria.



Death-rates from Malaria per mille.

Districts.	1929.	1930.	Increase + or decrease —.	Fever indices.		Increase + or decrease —.
				1929.	1930.	
Rajshahi ..	22.2	21.9	-0.3	43.4	45.0	+1.6
Jessore ..	21.7	17.9	-3.8	50.5	48.2	-2.3
Malda ..	20.2	24.4	+4.2	40.0	42.6	+2.6
Nadia ..	18.7	20.8	+2.1	55.0	56.5	+1.5
Dinajpur ..	18.6	15.2	-3.4	40.6	42.4	+1.8
Murshidabad ..	15.4	17.2	+1.8	45.2	41.7	-3.5
Pabna ..	14.1	15.1	+1.0	41.3	40.1	-1.2
Jalpaiguri ..	12.9	10.5	-2.4	42.1	41.6	-0.5
Rangpur ..	9.0	8.5	-0.5	31.2	26.6	-4.6
Bogra ..	8.8	8.9	+0.1	38.3	36.3	-2.0
Darjeeling ..	8.5	9.5	+1.0	17.9	16.8	-1.1
Khulna ..	8.5	6.7	-1.8	31.5	29.6	-1.9
Bankura ..	8.0	8.7	+0.7	41.6	43.1	+1.5
Faridpur ..	7.5	8.0	+0.5	23.8	26.6	+2.8
Burdwan ..	6.5	7.4	+0.9	47.1	53.4	+6.3
Birbhum ..	6.4	9.2	+2.8	37.9	47.0	+9.1
Hooghly ..	5.8	6.4	+0.6	54.5	46.6	-7.9
Midnapur ..	5.7	5.6	-0.1	34.7	21.6	-13.1
24-Parganas ..	2.5	2.0	-0.5	30.3	27.6	-2.7
Dacca ..	2.3	2.5	+0.2	8.3	9.7	+1.4
Howrah ..	2.1	2.2	+0.1	32.6	30.4	-2.2
Tippera ..	1.2	1.3	+0.1	7.2	7.2	±0
Mymensingh ..	1.1	1.4	+0.3	11.8	11.0	-0.8
Calcutta ..	0.9	0.7	-0.2	8.0	6.8	-1.2
Chittagong ..	0.2	0.8	+0.6	16.7	16.8	+0.1
Bakarganj ..	0.2	0.04	-0.2	9.6	8.3	-1.3
Noakhali ..	0.1	1.4	+1.3	12.6	10.5	-2.1

Fever indices, however, give a more accurate indication of the prevalence of malaria in various districts. From the last three columns it is obvious that the incidence of malaria was highest in Nadia and Burdwan, although the death-rate gives this position to Malda. The indices, however, when compared with the previous year, show an increase in 1930 in 10 districts and a reduction in the rest with the exception of Tippera where they remained unchanged.

47. Malaria in towns and rural areas.—The towns registered 3,181 deaths and a death-rate of 1.02 per mille in 1930 from malaria and the rural areas 333,698 deaths with a rate of 7.7 against 3,740, 1.2 per mille, 331,674 and 7.6 per mille respectively in 1929. Compared with the previous year the death-rate was reduced in the towns by 15.0 per cent., though there was an insignificant increase of 1.3 per cent. in the rural areas. 44 towns out of 118 returned rates above the provincial urban average for malaria (1.02), the most noticeable rates having been registered in Dhulian (Murshidabad district) 19.4, Kotchandpur

(Jessore district) 11·8, Chakdaha (Nadia) 11·7 and Birnagar (Nadia) 10·4. Asansol, Kamarhati, Comilla and Brahmanbaria with ·04 per mille each and Narayanganj and Chittagong with ·03 per mille each stood at the bottom of the list.

48. Quinine Consumption.—7468·3 lbs. of quinine were consumed in 1930 as compared with 8994·9 lbs. in the previous year. Birbhum, Burdwan, Malda and Dacca in which the fever indices had risen in the year under review, showed increased consumption while Faridpur, Dinajpur, Rajshahi, Nadia, Bankura and Chittagong, inspite of their increased incidence of fever, reduced their consumption. The average consumption per head of population was highest in Chittagong. The following statement shows the details of quinine consumption in every district.

Statement showing the details of quinine consumption during the year 1930

Districts.	Total quinine consumed in lbs.		Increase + or decrease — per cent.	Grains of quinine consum- ed per head of the population.		Increase or decrease in grain per head.	Fever indices.		Increase + or decrease —
	1929.	1930.		1929.	1930.		1929.	1930.	
Chittagong	748·5	690·2	-7·8	3·3	3·0	-0·3	16·7	16·8	+0·1
Jessore	832·0	620·4	-25·4	3·4	2·5	-0·9	50·5	48·2	-2·3
Mymensingh	896·0	593·4	-33·8	1·3	0·9	-0·4	11·8	11·0	-0·8
Dacca	544·0	575·9	+5·8	1·2	1·3	+0·1	8·3	9·7	+1·4
Tippera	606·8	541·0	-10·9	1·5	1·4	-0·1	7·2	7·2	+0
Faridpur	600·0	538·7	-10·2	1·9	1·7	-0·2	23·8	26·6	+2·8
Pabna	632·0	448·5	-29·0	3·2	2·3	-0·9	41·3	40·1	-1·2
Nadia	581·1	438·2	-24·6	2·7	2·1	-0·6	55·0	56·5	+1·5
Burdwan	253·7	313·1	+23·4	1·2	1·5	+0·3	47·1	53·4	+6·3
Noakhali	326·8	303·4	-7·2	1·6	1·4	-0·2	12·6	10·5	-2·1
Malda	249·7	274·2	+9·8	1·8	1·9	+0·1	40·0	42·6	+2·6
Khulna	346·8	241·1	-30·5	1·7	1·2	-0·5	31·5	29·6	-1·9
Murshidabad	265·7	235·4	-11·4	1·5	1·3	-0·2	45·2	41·7	-3·5
Rangpur	265·7	193·1	-27·3	0·8	0·5	-0·3	31·2	26·6	-4·6
Bakarganj	249·7	189·7	-24·0	0·7	0·5	-0·2	9·6	8·3	-1·3
Rajshahi	296·5	185·7	-37·4	1·4	0·9	-0·5	43·4	45·0	+1·6
24-Parganas	210·8	158·8	-24·7	0·6	0·4	-0·2	30·3	27·6	-2·7
Midnapur	183·4	155·4	-15·3	0·5	0·4	-0·1	34·7	21·6	-13·1
Hooghly	149·7	148·0	-1·1	1·0	1·0	+0	54·5	46·6	-7·9
Bankura	151·1	143·4	-5·1	1·1	1·0	-0·1	41·6	43·1	+1·5
Bogra	190·2	106·3	-44·1	1·3	0·7	-0·6	38·3	36·3	-2·0
Dinajpur	131·4	105·1	-20·0	0·5	0·4	-0·1	40·6	42·4	+1·8
Birbhum	60·0	84·5	+40·8	0·5	0·7	+0·2	37·9	47·0	+9·1
Calcutta	86·8	70·6	-18·7	0·6	0·4	-0·2	8·0	6·8	-1·2
Jalpaiguri	67·4	55·4	-17·8	0·5	0·4	-0·1	42·1	41·6	-0·5
Howrah	51·4	41·7	-18·9	0·4	0·3	-0·1	32·6	30·4	-2·2
Darjeeling	17·7	17·1	-3·4	0·4	0·4	+0	17·9	16·8	-1·1
Total	..	8,994·9	7,468·3	-17·0	..	..	..	..	..

49. Krishnagar Research Laboratory.—During the year 1930 altogether 5,736 mosquitoes collected from dwelling houses were dissected. Of these 551 were *A. rossi*, 373 *A. vagus*, 1,911 *A. fuliginosus*, 1,350 *A. pallidus*, 220 *A. philippinensis*, 96 *A. minimus* group, 22 *A. culicifacies*, 1,021 *A. pseudojamesi*, 188 *A. sinensis*, and 4 *A. stephensi*. Only *A. philippinensis* were found infected. In October only 1 out of 55 was found infected with sporozoits and 2 with Zygotes. In November, 2 out of 66 showed Zygotes in the stomach. No other species were found infected in nature.

By artificial feeding *A. stephensi*, *A. fuliginosus*, *A. pallidus* and *A. philippinensis* could be infected, the number of success in infection in case of *A. stephensi* was 24 out of 57, of *A. fuliginosus* 5 out of 27, of *A. pallidus* 4 out of 13 and of *A. philippinensis* 6 out of 37.

50. Sylee Laboratory in the Jalpaiguri Duars.—During the year 1930 altogether 433 mosquitoes were dissected, out of which 327 were *A. minimus*, 54 *A. maculatus*, 17 *A. fuliginosus*, 31 *A. listoni* and 4 *A. jeyporiensis*. The result of the dissection is as follows:

Mosquitoes.	Dissections.	Gland		Oocysts.
		infected.	Oocysts.	
<i>A. minimus</i>	..	327	19	4
<i>A. maculatus</i>	..	54	Nil	Nil
<i>A. fuliginosus</i>	..	17	1	Nil
<i>A. jeyporiensis</i>	..	4	Nil	1
<i>A. listoni</i>	..	31	Nil	Nil

All the infections were found between July and November.

Kala-azar.

51. General prevalence.—10,914 deaths were registered in 1930 from kala-azar, yielding a death-rate of .23 per mille, practically the same as in the previous year. 815 deaths were returned from towns of which 315 occurred in Calcutta, and 10,099 from the rural areas. Compared with 1929 the death-rate in all Bengal towns was reduced by 10·3 per cent. and in Calcutta by 23·7. In rural areas the number of deaths increased by 195 though the death-rate remained the same. 31 towns returned rates above the provincial urban average (.26). The highest mortality from kala-azar 3·1 was registered in Kalna (Burdwan district). 52 out of 118 towns did not record any death from this cause. Kala-azar accounted for 1·5 per cent. of fever deaths and 1·04 per cent. of total provincial mortality against 1·5 and .9 per cent. respectively in the previous year.

Deaths and death-rates from Kala-azar.

Years.	Number of deaths.			
	Bengal Presidency.	All Bengal towns.	Calcutta.	Rural areas.
1929	10,820	916	405
1930	10,914	815	315
Death-rates per mille.				
192923	.29	.38
193023	.26	.29

52. Kala-azar in districts.—The following statement shows the number of new kala-azar cases admitted to the various hospitals in the province since 1927. As stated in the previous report, the number of

such admissions reached its maximum in 1925 and has been gradually decreasing since 1927. Compared with the previous year there appears to have been an all-round reduction except in Murshidabad, Burdwan, Malda, Noakhali and Khulna where the increase was appreciable and in Hooghly, Chittagong, Bankura and Birbhum where it was insignificant.

Number of Kala-azar cases admitted for treatment.

Districts.	1927.	1928.	1929.	1930.
Rajshahi	19,001	12,039	11,921	11,675
24-Parganas	25,584	20,789	14,384	11,302
Calcutta	13,278	12,218	10,640	6,922
Nadia	8,815	8,075	7,485	6,824
Dacca	7,617	8,100	6,098	5,403
Jessore	17,741	7,008	5,563	4,807
Tippera	8,734	8,310	4,849	4,638
Mymensingh	7,452	6,590	5,325	4,620
Malda	5,119	3,340	3,494	4,173
Bakarganj	9,293	6,456	6,008	3,963
Murshidabad	2,876	2,063	2,696	3,947
Hooghly	4,388	5,532	3,622	3,760
Khulna	6,861	4,903	3,183	3,724
Rangpur	6,584	5,642	5,436	3,479
Burdwan	3,234	3,078	2,648	3,340
Faridpur	6,418	6,063	4,318	3,053
Noakhali	4,964	3,012	2,419	3,011
Dinajpur	3,311	4,493	3,703	2,730
Pabna	3,726	3,499	3,752	2,376
Chittagong	2,429	1,578	1,401	1,411
Howrah	3,632	2,738	1,808	1,207
Midnapur	2,716	1,453	1,217	1,179
Jalpaiguri	818	1,992	1,148	1,091
Bogra	3,080	2,341	1,167	876
Darjeeling	308	571	450	342
Bankura	2,048	46	66	100
Birbhum	47	41	44	64
Total	180,074	141,970	114,845	110,017

MAP SHOWING
KALA-AZAR
IN BENGAL 1930



53. **Enteric fever.**—Compared with the previous year, the death-rates from enteric fever in 1930 showed increases of 9·09 in the province and 9·5 per cent. in the rural areas and decreases of 4·9 per cent. in towns and 4·2 per cent. in Calcutta.

Deaths and death-rates from Enteric fever.

Years.	Number of deaths.			
	Province.	All towns.	Calcutta.	Rural areas.
1929	10,487	1,288	765	9,199
1930	11,144	1,222	729	9,922
Death-rates per mille.				
1929	0·22	0·41	0·71	0·21
1930	0·24	0·39	0·68	0·23

Eighteen towns returned rates above the urban average for enteric fever ('39), the highest being registered in Hooghly-Chinsura. No death from enteric fever was returned from 63 towns. 1·6 per cent. of fever deaths and 1·07 per cent. of total provincial mortality were due to enteric fever against 1·5 and ·9 per cent. in the previous year.

54. **Measles.**—The death-rate from measles in 1930 in both the province as a whole and the rural areas was higher than that in the previous year by 20 per cent., in all towns by 14·3 per cent. and in Calcutta by 62·5 per cent. With the exception of 6 towns all the others from which deaths from this cause were reported, returned rates above the provincial urban average ('08). No death from measles was reported from 81 out of 118 towns in the province. Measles accounted for ·4 per cent. of fever deaths and ·3 per cent. of total provincial mortality against ·3 and ·2 per cent. respectively in 1929.

Deaths and death-rates per mille from Measles.

Years.	Number of deaths.			
	Province.	All towns.	Calcutta.	Rural areas.
1929	2,582	230	82	2,352
1930	2,963	260	146	2,703
Death-rates per mille.				
1929	·05	·07	·08	·05
1930	·06	·08	·13	·06

55. Relapsing fever.—The following statement shows the number of deaths from relapsing fever as reported by the local sanitary authorities. They are obviously wrong and the Health Officers have been instructed to report in future such cases after making an accurate diagnosis.

Deaths from Relapsing Fever.

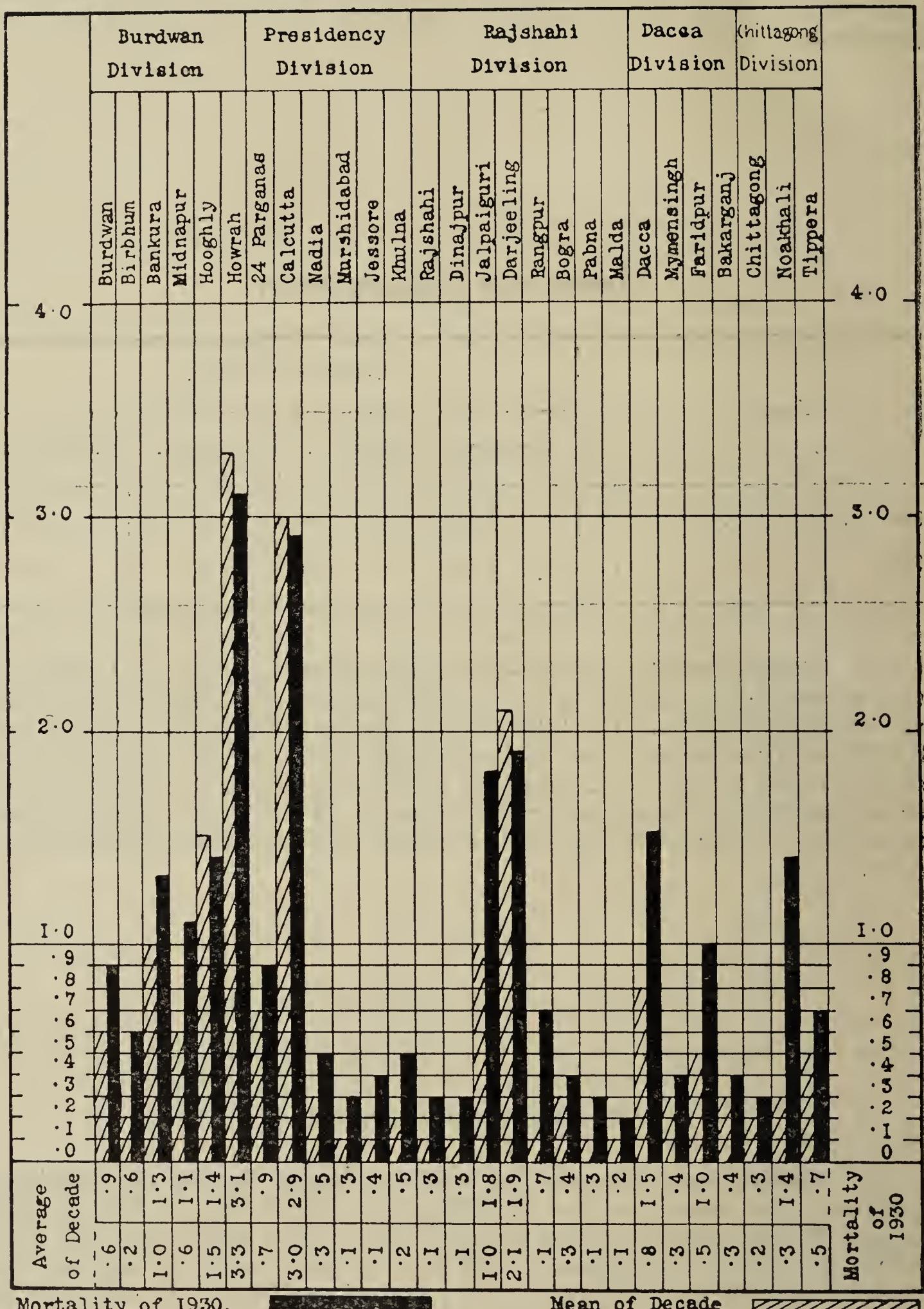
Years.	Number of deaths.			
	Province.	All towns.	Calcutta.	Rural areas.
1929	3,955	44	....	3,911
1930	4,767	24	....	4,743

56. Other fevers.—338,399 deaths with a death-rate of 7·3 per mille were attributed in 1930 to "other fevers" against 350,273 deaths and 7·5 per mille death-rate. Of these 8,673 deaths occurred in towns and 329,726 in rural areas, the death-rates being 2·8 and 7·6 per mille, the corresponding figures for 1929 being 9,852, 340,421, 3·2 and 7·8. This shows that there was a further reduction of 11,874 deaths among these unclassified fevers, of which 1,179 occurred in towns and 10,695 in rural areas.

Dysentery and Diarrhoea.

57. General prevalence.—The total number of deaths reported from dysentery and diarrhoea was 39,367 with a death-rate of ·84 in 1930 against 37,156 and ·80 in the previous year. The death-rate was thus higher by 5 per cent. against 1929 and by 40·0 per cent. against the previous quinquennial average (·6). 20,874 males and 18,493 females died from this cause. Taking these two diseases separately 22,252 deaths were due to dysentery and 17,115 to diarrhoea, against 21,052 and 16,104 respectively in 1929, the corresponding ratios being ·5 and ·4 in 1930 and ·4 and ·3 respectively in 1929. Dysentery and diarrhoea accounted for 3·77 per cent. of total deaths against 3·39 in the previous year.

Graph showing the Relative Intensity of Dysentery and Diarrhoea Mortality in each district of Bengal Presidency during the year 1930 and the average of Decade 1920-29.



58. **Seasonal incidence.**—These two diseases followed their usual course, the highest mortality being registered in November, December and January and the lowest in August. Compared with 1929, the number of deaths was higher in the first seven and lower in the last five months of the year.

59. **Dysentery and diarrhoea in districts.**—(a) *Combined dysentery and diarrhoea rates.*—Howrah and Calcutta as usual headed the list, while Malda (.20) was at the bottom. 8 other districts registered rates between 1·0 and 2·0 per mille, and the rest below 1·0 per mille. 12 districts returned death-rates above the provincial average (.84). Compared with the average of the previous decade, all the districts but four showed increases in their death-rates, the greatest increase occurring in Noakhali district. Against 1929 the rates were increased in 15 and reduced in the remaining 12 districts.

Dysentery and diarrhoea death-rates per mille.

Districts.	Average of decade. 1920-29.	1930.	Increase + or decrease (per mille.)	1929.	Increase + or decrease (per mille.)
Howrah	..	3·35	3·11	—·24	—·04
Calcutta	..	3·05	2·96	—·09	—·05
Darjeeling	..	2·15	1·82	—·33	—·15
Hooghly	..	1·46	1·41	—·05	—·08
Jalpaiguri	..	1·05	1·84	+·79	—·03
Bankura	..	.97	1·33	+·36	—·17
Dacca	..	.85	1·46	+·61	—·03
24-Parganas	..	.74	.93	+·19	+·10
Burdwan	..	.64	.88	+·24	+·02
Midnapur	..	.59	1·14	+·55	+·17
Tippera	..	.54	.74	+·20	+·06
Faridpur	..	.49	1·00	+·51	—·04
Mymensingh	..	.35	.44	+·09	+·03
Bakarganj	..	.34	.36	+·02	—·03
Noakhali	..	.29	1·39	+1·10	+·74
Nadia	..	.27	.54	+·27	+·07
Bogra	..	.26	.38	+·12	+·06
Khulna	..	.25	.51	+·26	—·09
Chittagong	..	.24	.30	+·06	—·02
Birbhum	..	.16	.54	+·38	+·14
Murshidabad	..	.14	.29	+·15	+·08
Jessore	..	.14	.41	+·27	+·01
Rangpur	..	.14	.70	+·56	+·18
Pabna	..	.13	.29	+·16	+·03
Rajshahi	..	.11	.32	+·21	+·07
Malda	..	.10	.20	+·10	—·21
Dinajpur	..	.07	.31	+·24	+·10

(b) *Dysentery and diarrhoea rates taken separately.*—Calcutta returned the highest death-rate (1·64) from dysentery and Howrah (2·02) from diarrhoea. 9 districts registered rates higher than the provincial average for dysentery and 10 higher than that for diarrhoea. Death-rates from both dysentery and diarrhoea were increased in 11 and reduced in 6 others. In 4 districts, the death-rate from dysentery was higher and that from diarrhoea lower than the previous year, while in four others the reverse was the case. In Chittagong and Dinajpur, however, the death-rate from dysentery was the same for both the years, but that from diarrhoea was reduced in the former and rose in the latter district in 1930.

Dysentery and diarrhoea death-rates per mille shown separately for each district.

Districts.	Dysentery.			Diarrhoea.		
	1929.	1930.	Increase + or decrease —.	1929.	1930.	Increase + or decrease —.
Calcutta	1.52	1.64	+ .12	1.49	1.31	- .18
Darjeeling	1.39	1.26	- .13	.58	.56	- .02
Dacca	1.11	1.07	- .04	.38	.39	+ .01
Howrah	1.02	1.09	+ .07	2.13	2.02	- .11
Jalpaiguri	.94	.93	- .01	.93	.91	- .02
Faridpur	.73	.69	- .04	.31	.30	- .01
Tippera	.48	.51	+ .03	.20	.23	+ .03
Bankura	.47	.33	- .14	1.03	1.00	- .03
Hooghly	.45	.40	- .05	1.04	1.00	- .04
24-Parganas	.45	.50	+ .05	.38	.43	+ .05
Noakhali	.43	.96	+ .53	.22	.42	+ .20
Midnapur	.43	.51	+ .08	.54	.62	+ .08
Khulna	.39	.29	- .10	.21	.22	+ .01
Bakarganj	.34	.28	- .06	.05	.08	+ .03
Nadia	.34	.39	+ .05	.13	.15	+ .02
Malda	.33	.13	- .20	.08	.07	- .01
Rangpur	.32	.38	+ .06	.20	.32	+ .12
Jessore	.30	.26	- .04	.10	.14	+ .04
Burdwan	.28	.32	+ .04	.58	.57	- .01
Mymensingh	.25	.30	+ .05	.16	.15	- .01
Chittagong	.19	.19	+ 0	.13	.11	- .02
Birbhum	.19	.28	+ .09	.21	.26	+ .05
Rajshahi	.18	.22	+ .04	.07	.10	+ .03
Bogra	.16	.20	+ .04	.16	.18	+ .02
Pabna	.16	.17	+ .01	.10	.11	+ .01
Murshidabad	.15	.22	+ .07	.06	.07	+ .01
Dinajpur	.15	.15	+ 0	.06	.16	+ .10

60. **Dysentery and diarrhoea in towns and rural areas.**—The death-rate in all towns was reduced in 1930 by 3.5 per cent. and in Calcutta by 1.6; in rural areas however it was increased by 8.9 per cent.

Dysentery and diarrhoea.

Years.	Number of deaths.		
	All towns.	Calcutta.	Rural areas.
1929	8,016	3,248	29,140
1930	7,739	3,188	31,628
Death rates per mille.			
1929	2.57	3.01	.67
1930	2.48	2.96	.73

The highest death-rate was returned from Ramjibanpur in Midnapur district (7·2) followed by North Dum-Dum (24-Parganas) (7·1) and the lowest from Patuakhali (Bakarganj) 1 per mille. No death from this cause was reported from Chakdaha (Nadia district).

Respiratory Diseases.

61. **General prevalence.**—Respiratory diseases claimed 56,082 victims in 1930 yielding a death-rate of 1·20 per mille against 52,843 and 1·14 per mille respectively in 1929, showing an increase of 5·3 per cent. The death-rate was higher by 50·0 per cent. than the provincial quinquennial average (.8). The death-rate from "other respiratory diseases" remained the same while other sub-heads showed increases when compared with the previous year. 5·37 per cent. of the total deaths were due to respiratory diseases against 4·83 in 1929.

Diseases.	Number.		Death-rates per mille.		Percentage of increase + or decrease -	Percentage of total deaths from res- piratory diseases.	
	1929.	1930.	1929.	1930.		1929.	1930.
Influenza ..	3,003	3,171	.06	.07	+16·7	5·68	5·65
Pneumonia ..	23,491	25,784	.50	.55	+10·0	44·45	45·98
Phthisis ..	10,969	11,576	.23	.24	+4·3	20·76	20·64
Other respiratory diseases ..	15,380	15,551	.33	.33	±0	29·11	27·73

62. **Seasonal incidence.**—The highest mortality from respiratory diseases 5,944 was registered in January and the lowest 3,697 in June. Compared with the previous year the death-rates showed increases in the first 8 months of the year, but were reduced during the remaining four. Against the previous decade they were higher in every month.

Seasonal Mortality from Respiratory Diseases.

Months.	Average, 1920-29.	1929.	1930.	Percentages of difference between 1929 and 1930.
January ..	3,119	4,627	5,944	+28·4
February ..	2,917	4,201	5,370	+27·8
March ..	3,389	4,768	5,332	+11·8
April ..	2,724	4,201	5,152	+22·6
May ..	2,363	3,335	4,305	+29·1
June ..	2,032	3,293	3,697	+12·2
July ..	2,070	3,647	4,083	+11·9
August ..	2,251	3,701	3,783	+2·2
September ..	2,261	4,091	3,742	-8·5
October ..	2,528	4,434	4,387	-1·1
November ..	3,049	5,969	4,620	-22·6
December ..	3,353	6,576	5,667	-13·8

63. **Respiratory diseases by districts.**—Ten districts returned death-rates above the provincial average (1·2). Calcutta had the highest rate (8·7) followed by Jalpaiguri (3·9) and Howrah (3·7). The lowest rate 1 per mille was registered in Bakarganj. Compared with the average of the previous decade, all the districts showed increases except Calcutta in which there was a reduction of .4 per mille in 1930.

and Bogra and Bakarganj in which there was no change. Against the previous year it was higher in 13 districts, lower in 7 others and remained stationary in the remaining 7.

Death-rates from Respiratory Diseases per mille.

Districts.	Average of decade 1920-29.	1930.	Increase + or decrease —	1929.	Increase + or decrease —
			(per mille.)		(per mille.)
Calcutta	..	9.1	8.7	—.4	9.6
Howrah	..	3.0	3.7	+.7	3.6
Darjeeling	..	2.4	3.4	+1.0	3.1
Hooghly	..	1.4	2.8	+1.4	2.8
Jalpaiguri	..	1.2	3.9	+2.7	3.1
Bankura	..	1.1	2.1	+1.0	2.4
24-Parganas	..	1.1	1.6	+.5	1.7
Burdwan	..	1.0	1.6	+.6	2.0
Midnapur	..	.7	1.5	+.8	1.5
Nadia	..	.7	1.0	+.3	1.1
Bogra	..	.4	.4	—.0	.3
Dacca	..	.4	1.0	+.6	1.0
Birbhum	..	.4	1.9	+1.5	1.3
Faridpur	..	.3	1.0	+.7	1.1
Khulna	..	.3	.8	+.5	.8
Tippera	..	.3	.5	+.2	.4
Jessore	..	.3	.9	+.6	.5
Murshidabad	..	.2	.6	+.4	.3
Mymensingh	..	.2	.3	+.1	.3
Dinajpur	..	.2	1.0	+.8	.5
Pabna	..	.2	.5	+.3	.6
Chittagong	..	.1	.3	+.2	.1
Bakarganj	..	.1	.1	—.0	.1
Rangpur	..	.1	.8	+.7	.6
Malda	..	.1	.3	+.2	.2
Rajshahi	..	.1	.3	+.2	.3
Noakhali	..	.06	1.2	+1.14	.2

64. **Respiratory diseases in urban and rural areas.**—During the year under review the death-rate in towns, compared with the previous year, was reduced by 5.6 per cent. and in Calcutta by 9.4 per cent. and increased slightly in the rural areas. A little less than two-thirds of the total deaths in all towns occurred in Calcutta alone. Khirpai as in the last year registered the highest rate (13.6) followed by Ramjibanpur (11.6), Pabna and Comilla returned the lowest rate (.1 per mille each).

Deaths and death-rates from Respiratory Diseases.

Years.		Number of deaths.		
		All towns.	Calcutta.	Rural areas.
1929	..	16,948	10,391	35,895
1930	..	15,845	9,355	40,237
Death-rates per mille.				
1929	..	5.4	9.6	.8
1930	..	5.1	8.7	.9

Influenza.

65. General prevalence.—An excess of 168 deaths from influenza over those in the previous year was reported in 1930. The mortality increased by 241 in the rural areas, but diminished by 73 in all towns including 59 in Calcutta. In the province, the increase in the death-rate was 16·6 per cent. but there was a reduction in all towns of 10·5 per cent. and of 11·4 in Calcutta. Influenza deaths were reported from 31 out of 118 towns, in 14 of which the death-rate was above the provincial urban average (.17). In only one town Ramjibanpur (Midnapur district) was the death-rate (1·9) above 1·0 per mille, in 24 it was between 1·0 and 0·1 per mille and in the remaining six below 0·1. The lowest rate .03 per mille each was returned from Midnapur, South Suburban and Narayanganj.

Deaths and death-rates from Influenza.

Years.	Number of deaths.			
	Province.	All towns.	Calcutta.	Rural areas.
1918	20,901	..	..
1929	3,003	591	478
1930	3,171	518	419

Death-rates per mille.				
1929 ..	..	.06	.19	.44
1930 ..	..	.07	.17	.39

66. Influenza in districts.—The rates were higher than the provincial average in 8 districts. Seven districts returned death-rates between 0·1 and 1·0 per mille and all the rest below 0·1. Calcutta registered the highest death-rate (.39) followed by Jalpaiguri (.31) and Noakhali (.26). Bakarganj recorded the lowest rate .004 and Pabna .007 per mille.—Compared with the previous year the death-rates were higher in 13 districts, lower in 10 others and remained unchanged in four.

Death-rates from Influenza per mille.

Districts.		1929.	1930.	Increase+ or decrease-
Jalpaiguri45	.31
Calcutta44	.39
Bankura21	.07
Darjeeling16	.16
Nadia11	.02
24-Parganas11	.14
Burdwan10	.05
Howrah09	.12
Hooghly06	.08
Tippera06	.06
Dacca05	.04
Birbhum05	.14
Rangpur05	.06
Bogra04	.02
Midnapur04	.06
Rajshahi04	.01
Faridpur03	.02
Dinajpur03	.06
Pabna03	.007
Mymensingh02	.02
Jessore02	.02
Khulna01	.03
Murshidabad01	.06
Noakhali01	.26
Malda01	.02
Chittagong006	.05
Bakarganj001	.004

Pneumonia.

67. **General prevalence.**—The total number of deaths from pneumonia in the province and the death-rate increased by 2,293 and 10·0 per cent. in 1930. This increase occurred only in the rural areas where the death-rate was 18·9 per cent. higher than in the previous year; in the towns however there was a reduction of 9·7 per cent. while in Calcutta it amounted to 16·7 per cent. Only 3 towns did not return any death from this cause. 22 towns recorded death-rates above the provincial urban average (2·14). The highest mortality was registered in Khirpai (10·6) and the lowest .05 per mille in Pabna.

Deaths and death-rates from Pneumonia.

Years.	Province.	Number of deaths.		
		All towns.	Calcutta.	Rural areas.
1929	23,491	7,373	4,195
1930	25,784	6,677	3,491
			Death-rates per mille.	
192950	2·37	3·89
193055	2·14	3·24

68. **Pneumonia in districts.**—In 12 districts death-rates were higher than the provincial average (.55). Six districts returned rates above

1·0 per mille, Calcutta with its 3·24 per mille standing at the top of the list, followed by Jalpaiguri (2·42). Mymensingh and Bakarganj registered ·08 and ·03 per mille respectively. The remaining districts recorded rates between these two extremes. Compared with the previous year all the districts but 9 returned higher rates.

Death-rates from Pneumonia per mille.

Districts.		1929.	1930.	Increase+ or decrease-
Calcutta	3·89	3·24
Hooghly	1·77	1·80
Jalpaiguri	1·62	2·42
Howrah	1·35	1·50
Darjeeling	1·24	1·18
Burdwan	1·06	·86
Bankura	·96	1·09
Midnapur	·94	·88
24-Parganas	·85	·82
Nadia	·56	·61
Faridpur	·40	·39
Birbhum	·38	·69
Dacca	·36	·31
Khulna	·36	·39
Dinajpur	·32	·59
Jessore	·27	·51
Pabna	·25	·24
Rangpur	·22	·29
Murshidabad	·15	·36
Tippera	·12	·14
Bogra	·11	·14
Chittagong	·10	·16
Rajshahi	·08	·12
Malda	·08	·14
Mymensingh	·06	·08
Bakarganj	·04	·03
Noakhali	·007	·41

Phthisis.

69. **General prevalence.**—Deaths reported from this cause amounted to 11,576 in the province in 1930, showing an increase of 607 over the previous year. The increase in rural areas was 605 and in towns only 2. The death-rates were higher than the previous year by about 9 per cent. in the province and by about 5 per cent. in the rural areas. About 70 per cent. of the deaths in all towns occurred in Calcutta alone. 10 towns reported death-rates above the provincial urban average ($1\cdot16$), 13 towns returned rates above $1\cdot0$ per mille, 76 between $0\cdot1$ and $1\cdot0$ per mille and 8 below $0\cdot1$ (Asansol, Titagarh, Krishnagar, Serajganj, Madaripur and Comilla $\cdot04$ each, Pabna and Kishorganj $\cdot05$ each). No death from this cause was reported from 21 towns.

Phthisis.

Years.	Number of deaths.			
	Province.	All towns.	Calcutta.	Rural areas.
1929	10,969	3,613	2,591	7,356
1930	11,576	3,615	2,547	7,961
Death-rates per mille.				
1929 .. .. ..	.22	1.16	2.40	.17
1930 .. .. ..	.24	1.16	2.36	.18

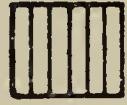
70. **Phthisis in districts.**—As usual Calcutta returned the highest death-rate $2\cdot36$ per mille followed by Darjeeling $1\cdot35$; 19 others between $0\cdot1$ and $1\cdot0$ per mille and the remaining 6 below $0\cdot1$, the lowest rate $0\cdot05$ being registered in Bakarganj. The death-rates in 9 districts were higher than the provincial average (.24). Compared with the previous year the rates stood higher in 1930 in 15 districts, were lower in 8 others and continued the same in the remaining 4.

MAP SHOWING TUBERCULOSIS IN BENGAL 1930

CALCUTTA



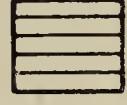
OVER 1 PERCENT



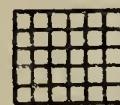
.15 TO .25 PERCENT



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.10 TO .15 "



.25 TO .5 "



BELOW .10 PERCENT

Death-rates from Phthisis per mille.

Districts.	1929.	1930.	Increase+ or decrease-
Calcutta	2.40	2.36	- .04
Darjeeling	1.23	1.35	+ .12
Howrah	.74	.79	+ .05
Jalpaiguri	.60	.75	+ .15
Hooghly	.44	.47	+ .03
Bankura	.44	.36	- .08
Burdwan	.33	.28	- .05
24-Parganas	.33	.31	- .02
Midnapur	.27	.24	- .03
Birbhum	.22	.29	+ .07
Nadia	.19	.18	- .01
Dacca	.19	.19	± 0
Faridpur	.17	.17	± 0
Khulna	.17	.16	- .01
Pabna	.15	.13	- .02
Jessore	.12	.17	+ .05
Bogra	.11	.11	± 0
Rangpur	.11	.16	+ .05
Mymensingh	.10	.11	+ .01
Murshidabad	.09	.12	+ .03
Tippera	.08	.08	± 0
Dinajpur	.08	.15	+ .07
Malda	.05	.07	+ .02
Bakarganj	.04	.05	+ .01
Chittagong	.03	.06	+ .03
Rajshahi	.03	.06	+ .03
Noakhali	.005	.08	+ .075

71. **Other respiratory diseases.**—5,035 deaths reported under this head were registered in towns and 10,516 in rural areas, making up a total of 15,551 against 5,371, 10,009 and 15,380, respectively in 1929

showing a reduction of 336 deaths in towns and an increase of 507 in rural areas, the net result being an increase of 171 deaths in the province.

Injuries.

72. General prevalence.—The total number of deaths from injuries was further reduced in 1930 by 605. There was a diminution of 665 under wounds and accidents and of 45 under snake bites, while suicides and rabies increased by 65 and 40, respectively. Injuries accounted for 1·9 per cent. of the total deaths in the province.

		1929.	1930.
Deaths from Injuries—			
Suicide	2,770	2,835	
Wounds and accidents	12,437	11,772	
Snake-bite and attacks of wild animals	4,255	4,210	
Rabies	540	580	
Total	<u>20,002</u>	<u>19,397</u>	
Death-rates per mille—			
Suicide .. ..	.06	.06	
Wounds and accidents	2·7	.25	
Snake bites and attacks of wild animals .. ..	.09	.09	
Rabies .. ..	.01	.01	
Total	<u>.43</u>	<u>.42</u>	

73. Deaths due to injuries in towns and rural areas.—173 deaths from suicides, 1,354 from wounds and accidents, 92 from snake bites and 47 from rabies making up a total of 1,666 with a death-rate of .53 per mille occurred in towns against 1,818 with a rate of .58 in the previous year. Of the total deaths in all towns 730 or about 44 per cent. were registered in Calcutta. The highest death-rate from injuries (2·6 per mille) was returned from Serajganj in Pabna district and the lowest (.04) from Bally, Barrackpur and Brahmanbaria each. The rural areas returned 17,731 deaths against 18,184 in 1929. The death-rates were reduced by 8·6 per cent. in all towns, by 13·9 in Calcutta and by 2·4 in rural areas.

Causes.	Deaths.			Death-rates per mille.		
	All towns.	Calcutta.	Rural areas.	All towns.	Calcutta.	Rural areas.
Suicides	173	57	2,662	.06	.05	.06
Wounds and accidents	1,354	647	10,418	.43	.60	.24
Snake-bites and attacks of wild animals	92	..	4,118	.03	..	.09
Rabies	47	26	533	.01	.02	.01
Total—						
1930	1,666	730	17,731	.53	.68	.41
1929	1,818	848	18,184	.58	.79	.42

74. Deaths due to injuries by districts.—The highest death-rate from suicides was returned from 24-Parganas and Nadia (.14) each,

from wounds and accidents from Calcutta (.60), from snake-bites from Murshidabad (.25) and from rabies from Birbhum (.04); the lowest from Chittagong (.01), Tippera (.10), Tippera (.01) and Darjeeling and Bogra (.003 each) respectively.

Districts.	Suicides.		Wounds and accidents.		Snake-bite.		Rabies.	
	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.
Burdwan ..	98	.07	325	.23	131	.09	14	.01
Birbhum ..	54	.06	197	.23	84	.10	36	.04
Bankura ..	63	.06	198	.19	108	.11	11	.01
Midnapur ..	120	.04	799	.30	269	.10	52	.02
Hooghly ..	93	.09	327	.30	163	.15	13	.01
Howrah ..	111	.11	380	.38	62	.06	23	.02
24-Parganas	354	.14	782	.32	306	.12	32	.01
Calcutta ..	57	.05	647	.60	..	..	26	.02
Nadia ..	208	.14	391	.26	333	.22	25	.02
Murshidabad	113	.09	349	.28	319	.25	17	.01
Jessore ..	205	.12	320	.19	253	.14	14	.008
Khulna ..	176	.12	449	.31	212	.14	39	.03
Rajshahi ..	134	.09	325	.22	361	.24	30	.02
Dinajpur ..	89	.05	264	.15	164	.10	32	.02
Jalpaiguri	32	.03	158	.17	74	.08	6	.006
Darjeeling..	18	.06	58	.20	12	.04	1	.003
Rangpur ..	62	.02	384	.15	146	.06	24	.01
Bogra ..	80	.08	227	.22	121	.11	3	.003
Pabna ..	88	.06	326	.23	153	.11	27	.02
Malda ..	60	.06	157	.16	160	.16	15	.02
Dacca ..	85	.03	572	.18	106	.03	22	.007
Mymensingh	167	.03	751	.15	152	.03	40	.008
Faridpur ..	114	.05	390	.17	176	.08	23	.01
Bakarganj	156	.06	1,225	.47	174	.07	10	.004
Chittagong	18	.01	767	.48	74	.04	11	.007
Noakhali ..	28	.02	716	.49	65	.04	14	.01
Tippera ..	52	.02	288	.10	32	.01	20	.007

(a) *Suicides*.—1,617 females were reported to have committed suicide against 1,218 males in 1930.

(b) *Snake-bites*.—63 cases of snake-bite were treated in the various hospitals and dispensaries, 27 with potash permanganate, and 2 with antivenene. The results are vague in many cases. 21 are reported to have been cured with the former with 6 deaths and 2 with the latter method of treatment. 30 cases are said to have been cured with Lexin.

75. **All other causes**.—158,113 deaths were registered in 1930 as having been due to "All other causes" against 169,234 in the previous year. Of these 21,552 were shown to have occurred in towns and 136,561 in the rural areas of the province against 23,242 and 145,992

respectively in 1929. The death-rates were 3·4 (provincial), 6·9 (urban) and 3·1 (rural) against 3·6, 7·5 and 3·4 per mille respectively during the previous year.

Miscellaneous.

I.—Activities of the Government of Bengal, Public Health Department.

76. Sanitation in the Ports of Calcutta and Chittagong.—

(a) PORT OF CALCUTTA.—(i) *Inspection of vessels.*—The town and the Port of Calcutta were free from plague in 1930 and hence no routine disinfection was enforced of clothing and bedding of Asiatic and African crew and of third class deck passengers of ships leaving for any port beyond British India. 21,582 European and 92,387 Asiatic seamen were inspected on inward bound vessels and 23,118 and 94,175 respectively on outward bound vessels. The corresponding figures for 1929 were 25,500, 97,729, 27,553 and 102,670. 6,655 boats, lighters, etc., were also inspected. There were 66 cases of sickness in the harbour against 75 in the previous year.

(ii) *Public Health, European.*—There were 480 admissions and 8 deaths. The admission rate to hospitals of the European seamen, for all causes calculated on arrivals was 22·19 per mille and the death-rate 3·36 against 1·15 in 1929. 62 European seamen suffering from venereal diseases were also admitted to the hospital, and the proportionate admission rate of these was 129·16 per mille of the total number of admissions against 111·28, the quinquennial mean. Three deaths were registered at the shipping office (1 from heart failure, 1 from injury and 1 from drowning), the death-rate being 1·13 per mille on arrivals.

(iii) *Public Health, Asiatic.*—The total number of deaths reported by the police among the Asiatic floating population of the port was 168 (6 from cholera, 2 from smallpox, 4 from bowel complaints, 41 from accidental injuries, 49 from drowning and one by suicide and the remaining 65 from natural causes) and the death-rate 9·11 per mille against 154 or 8·35 in the previous year. 119 Asiatic seamen and boatmen were admitted to the various hospitals, out of which 14 died (9 from cholera and 5 from other causes).

(iv) *Infectious diseases.*—Five ships with infectious disease on board arrived in the port in 1930. The patients were removed to hospital and necessary precautionary measures were taken. No case of infectious disease was reported to have occurred on undocked Indian sea-going craft. No case of sleeping sickness was found on any vessel coming from the East African ports, nor was any alien leper found to have entered the country through the port of Calcutta.

(v) *Damaged foodstuffs.*—72 samples of suspected ghee used as ration for lascar crew were collected and sent to the Bengal Public Health Laboratory for examination. Most of them were found to be much below the standard and of inferior quality.

(vi) *Disinfection and fumigation.*—20 sea-going vessels, 19 inland steamers, flats and launches and 16 lighters, bhangas and dinghies were disinfected and 68 sea-going vessels fumigated with the Clayton apparatus.

(vii) *Vaccination.*—1,180 deck passengers of 69 ships proceeding to the Straits Settlements were vaccinated on payment at the request of

the shipping agents. About 250 persons of the floating population of the port were vaccinated free of charge.

(b) PORT OF CHITTAGONG.—(i) *General sanitation.*—There were no outbreaks of cholera, smallpox or plague in any vessel lying in the port in 1930.

(ii) *Public Health, European.*—The admission rate of European seamen to hospital for all causes calculated on arrival figure was .74 per mille. There was no death in the hospital. Many cases of beri-beri arrived in the port by sea from Burma seaports and some proved fatal.

(iii) *Public Health, Asiatic.*—26 Asiatic seamen were admitted in the Chittagong General Hospital, 2 suffering from dysentery, 1 from malaria, 5 from simple fever, 2 from influenza, and 16 from other causes. There were no deaths.

(iv) *Vaccination and anti-cholera inoculation.*—165 crew were vaccinated and 81 anti-cholera inoculations were performed.

(v) *Disinfection and fumigation.*—12 ships were partially disinfected and one fumigated.

(vi) *Damaged foodstuffs.*—2,000 lbs. of ghee supplied for the crew of the S.S. "Haliartus" were condemned, as also the meat stock in the ice chest on board the S.S. "Athelmere."

(vii) No alien leper entered the country through the Port of Chittagong.

77. Public Health Laboratories.—(1) Bengal Public Health Laboratory.—(a) *Chemical Section.*—1,838 samples of water (including 1,582 routine and 256 special), 1,182 of septic tank effluents (including 921 routine and 261 special), 14 minerals and 15 miscellaneous, along with 257 (special research) or a total of 3,306 samples were chemically examined against 3,681 in the previous year.

(b) *Bacteriological Section.*—3,813 samples of water, 1,142 from septic tanks, 125 of vaccine lymph, 373 rats, 7 disinfectants and 97 miscellaneous making up an aggregate of 5,557 were examined bacteriologically against 5,663 in 1929.

(c) *Food Section.*—4,749 samples of food including 645 of the previous year were examined during the year, the result of analyses of those received from district boards and municipalities being as follows:—

Articles.	District Boards.		Municipalities.	
	Number analysed.	Ratio per cent. adulterated.	Number analysed.	Ratio per cent. found adulterated.
Ghee	307	47·8	796	30·8
Mustard oil	1,554	63·1	794	34·7
Milk	96	79·1	181	63·0
Wheat flour	56	14·3	162	8·0
Tea	1	..	45	6·7
Butter	8	62·5	11	45·5
Dahi .. .. ..	..	..	14	85·7
Chhana	2	..	..	..

Of the 538 samples of milk received from the School of Tropical Medicine, only 2 were found deficient in milk fat. Of the samples examined other than those under the Food Adulteration Act, the ratio of adulteration per cent. was 46·4 for ghee, 18·0 for mustard oil and 6·6 per cent. for milk.

Although the Food Adulteration Act had been extended to all the municipalities and the districts, yet only two of the district boards, viz., Rangpur and Khulna, had opened laboratories by the end of the year 1930. Samples were received from 16 out of 18 district boards and 45 out of 90 municipalities within the jurisdiction of this laboratory. Over 60 per cent. of the samples from the district boards were found adulterated whereas in the case of the municipalities the adulteration was 33·4 per cent. The following table shows the percentage of adulteration of articles of food in the area of local authorities who sent more than 200 samples in the year:—

Local authorities.	Number.	Rate per cent. of samples found adulterated.
Howrah Municipality ..	897	23·7
Nabadwip Municipality ..	248	35·4
Pabna District Board ..	546	61·8
Nadia District Board ..	322	58·1
Khulna District Board ..	341	56·0
Murshidabad District Board ..	196	74·0
Birbhum District Board ..	162	58·0

It is clear from the above that in municipalities and villages in which the sale of articles of food is hardly or not at all being controlled by law, over 50 per cent. of the articles are adulterated.

(d) *Research work.*—(1) *Koser's Citrate Utilisation Test.*—Further work in 1930, on a large number of organisms of the *Coli* group confirmed the inference drawn in the previous year that the power to utilise citrate or inability to do so is a fairly constant characteristic of the organisms of the *B. Coli* group.

(2) *Verification of Bedford's Test, a rapid method of obtaining Voges Proskaner reaction.*—This test was tried on a large number of samples of water and on the results being compared with those obtained by the usual laboratory method, it proved fairly good but inconstant giving negative results in some cases which were positive by the routine method but never giving positive result when the routine method failed.

(3) The efficiency of the Katadyn Sterilisator was also tested by a series of experiments which showed that:—

(a) river water with *B. Coli* in 1 c.c. had none in 60 c.cs. after one hour's treatment in the sterilisator. Samples containing *B. Coli* in 1 c.c. also became similarly sterilised in one hour;

(b) water treated by itself showed germicidal power, the maximum potency being acquired in 2 hours' treatment; and that such water mixed with polluted water up to 50 per cent. eliminated *B. Coli* which were present in 1 c.c. of the original water. With the Katadyn treated water added in a lesser amount, the result was not so good; and

(c) in the case of grossly polluted water put into the sterilisator for 2 hours, it was found that all the lactose fermenters of Clemesha's class I were killed but those of classes II and III survived.

(4) *Treatment of Tannery Effluent.*—Research work was done to find out the best method of purification of the effluent of the Jullundur Tannery at Tollyganj. It was found that:—

- (a) filtration was not suitable, the filter beds getting choked up with suspended matter without any appreciable improvement of the effluent;
- (b) chlorination even with 50 parts per million diminished the foul odour only temporarily, the smell reappearing after some time and the effluent not becoming clear or colourless.
- (c) activated aerofiltration on slightly modified lines of Mr. C. H. Hurds, the activated sludge being produced in 8 weeks by mixing a certain quantity of sewage containing the aerobic bacteria with the waste liquid, gave purification and deodorisation by 10 to 12 hours' treatment. With stronger and thoroughly mixed sewage, the purification reached the standard recommended by the Royal Commission on Sewage Disposal, the suspended matter removed being 98 per cent.

II.—Dacca Branch Public Health Laboratory.—(a) *Water Analysis.*—160 samples of water including 154 routine, 2 from different jails and 4 from other bodies were examined chemically and 428 (414 routine and 14 special) bacteriologically in 1930 against 176 and 435 respectively in 1929.

(b) *Sewage effluents from Dacca Sewage Works.*—280 samples were examined chemically against 328 in 1929; none was examined bacteriologically.

(c) *Foodstuffs.*—1,888 samples were examined in 1930 against 1,339 in the previous year. 990 of these samples were received from district boards and 898 from municipalities and out of these 66 per cent. and 43 per cent. respectively were found adulterated. The result of analysis of the samples of the various foodstuffs was as follows:—

Articles.	District Boards.		Municipalities.	
	Total analysed.	Ratio per cent. found adulterated.	Total analysed.	Ratio per cent. found adulterated.
Ghee	62	66
Mustard oil	667	63
Milk	246	71
Wheat flour	2	..
Tea	6	100
Butter	4	75
Dahi	3	100

Samples were received from all the 7 district boards and 16 out of 26 municipalities in the jurisdiction of this laboratory. The result of analyses is shown below:—

District Boards.	Total samples.	Adulterated samples.	Percentages of adulteration.	
			of adulteration.	
Noakhali ..	.. 422	249	59	
Mymensingh ..	.. 74	45	60	
Faridpur ..	.. 286	197	69	
Dacca ..	.. 5	4	80	
Tippera ..	.. 196	150	76	
Chittagong ..	.. 6	3	50	
Bakarganj ..	.. 1	1	100	
 Municipalities.				
Dacca ..	.. 542	204	37	
Chittagong ..	.. 142	70	49	
Faridpur ..	.. 38	14	36	
Rajbari ..	.. 41	17	42	
Barisal ..	.. 26	22	85	
Perojpur ..	.. 1	1	100	
Jhalakati ..	.. 5	5	100	
Chandpur ..	.. 24	16	67	
Kishorganj ..	.. 6	..	..
Jamalpur ..	.. 11	2	18	
Sherpur ..	.. 11	10	90	
Cox's Bazar ..	.. 5	4	80	
Narayanganj ..	.. 20	9	45	
Mymensingh ..	.. 16	8	50	
Tangail ..	.. 1	..	..
Noakhali ..	.. 9	2	22	

(d) One sample each of alum and bleaching powder received from Dacca municipality and Dacca Central Jail was also examined in 1930.

III.—Bengal Excise Laboratory.—The following 7,263 samples received from the bonded laboratories, the Excise Department and the police were examined at the Bengal Excise Laboratory in 1930 against 7,976 in the previous year:—

Spirituous medicinal preparations ..	..	..	6,503
Country spirit ..	..	..	5
Pachwai ..	..	..	11
Brandy, beer, gin, rum and medicated wines ..	..	..	7
Water (for ascertaining suitability for reduction purposes) ..	..	..	31
Instruments for standardisation (including 64 glass hydrometers, 1 ebullioscope, 24 brass hydrometers and 50 thermometers) ..	..	..	139
Special samples for which analytical fees were charged ..	..	..	2
Court case samples (mostly liquor) ..	..	..	352
Distillery samples ..	..	..	213
Total ..	..	..	7,263

IV.—Bengal Vaccine Laboratory.—The following statements show the monthly productions and issues (free and on payment) of the anti-cholera vaccine during the year 1930. It was not found necessary during the year under review to purchase any vaccine from Kasauli or from any other foreign country. Three hundred thousand tubed doses of the vaccine are kept ready packed in the cold storage of the Calcutta School of Tropical Medicine and Hygiene.

STATEMENT A.

Anti-cholera vaccine produced during the calendar year 1930.

Months.							Cubic centimetres.
January	..	..	..	..	..	..	275,210
February	..	..	..	..	..	..	252,410
March	..	..	..	..	..	..	142,000
April	..	..	..	..	..	..	135,000
May	..	..	..	..	..	..	129,000
June	..	..	..	..	..	..	139,500
July	..	..	..	..	..	..	123,000
August	..	..	..	..	..	..	132,000
September	..	..	..	..	..	..	118,500
October	..	..	..	..	..	..	105,000
November	..	..	..	..	..	..	238,600
December	..	..	..	..	..	..	75,000
					Total	..	1,865,220

STATEMENT B.

Anti-cholera vaccine issued month by month during 1930.

Months.		Free supply (c. cs.)	Supplied on payment (c. cs.)	Total (c. cs.)
January	..	..	236,705	3,020
February	..	..	58,980	1,660
March	..	..	125,900	2,480
April	..	..	190,305	2,900
May	..	..	72,815	12,450
June	..	..	14,800	360
July	..	..	17,960	630
August	..	..	2,000	960
September	..	..	32,195	440
October	..	..	44,100	60
November	..	..	119,620	2,310
December	..	..	271,575	2,600
	Total	..	11,86,955	29,870
				12,16,825

V.—Darjeeling Municipal Laboratory.—(a) *Water Analysis.*—55 samples of water were examined chemically and 307 bacteriologically against 66 and 281 respectively in the previous year.

(b) *Sewage Effluents.*—105 samples were examined chemically against 54 in 1929.

(c) *Foodstuffs.*—435 samples of articles of food were examined with the following results:—

	Articles.				Total examined.	Ratio per cent. of samples adulterated.
Milk	353	8·4
Butter	17	58·9
Ghee	23	13·0
Mustard oil from Darjeeling Municipality				..	34	5·8
Mustard oil from Kurseong Municipality				..	6	..

(d) *Miscellaneous.*—Two samples of human milk were also examined.

(e) *Clinical Work.*—168 samples of urine, 103 of blood, 21 of pus, etc., 93 of stools, 326 swabs, 94 of sputum and 1 of vaccine or a total of 806 specimens was examined clinically.

The drop in the number of clinical specimens was due to the establishment of a separate laboratory for this work in the tea gardens.

78. **School hygiene.**—16,700 boys and 524 girls were medically inspected during the year 1930 in 159 schools by 26 medical officers, Dr. Some of Asansol Mines Board of Health inspecting 2,786 boys and 274 girls in 69 schools, Dr. Adhicary, Health Officer of the Narayanganj Municipality, 1,420 students in 4 local schools, Dr. Basak of the Public Health Department 1,018 scholars in 10 Government-aided schools of Calcutta, Dr. Roy, another Government school medical officer, 2,059 students in 9 Government and Government-aided schools, in addition to 436 in Visudhananda Saraswati Vidyalaya, Dr. Bose also of the Public Health Department 2,170 in 9 Government and Government-aided schools, as also 560 in the Bangabasi Collegiate School, the others inspecting less than 1,000 scholars each.

Excluding girls, the results of the inspection of boys were as follows:—23 per cent. were well nourished, 53 per cent. fairly nourished and 24 per cent. ill nourished; 32 per cent. had good clothing, 24 per cent. were badly clothed; 33 per cent. had no shoes, 67 per cent. wore shoes. While the average height at different ages compared favourably with the anthropometric standard, the average weight was comparatively far less favourable. 4·5 per cent. were affected with some kind of skin disease or other, mostly ringworm or scabies. 3·2 per cent. had no marks of vaccination. 14·7 per cent. were found to have eye troubles, majority suffering from defective vision. In Calcutta, students found suffering from defective vision were examined every Saturday afternoon for refractive errors at the Refraction Room of the Medical College Eye Hospital. 425 students were thus examined and spectacles supplied free of charge to 77 deserving poor students on the recommendation of their Head Masters as follows:—for hypermetropia 17, for hypermetropic astigmatism 28, for myopia 23, for myopic astigmatism 8, for other defects of vision 1. 1·4 per cent. had ear disease, mostly

otorrhœa. 1·1 per cent. were suffering from some kind of nasal disease, chiefly rhinitis. 13·3 per cent. had carious teeth, guardians of 1,836 such boys being notified about the condition of their wards. 11·5 per cent. had enlarged tonsils, 3 per cent. adenoids, and 5·5 per cent. enlarged lymph glands. 1·6 were suffering from bronchitis, 56 boys having either actual or suspected tuberculosis of the lungs. ·5 per cent. had heart trouble, ·1 per cent. pharyngitis, 4·9 per cent. enlargement of the spleen, and ·7 per cent. enlargement of the liver. ·2 per cent. were suffering from rickets and ·1 per cent. were deformed. In ·7 per cent. speech was defective. Only 3 boys were found to have paralysis. 5·8 per cent. were found either actually suffering from malaria at the time of inspection or had recently suffered from the same, spleen being enlarged in the case of 90 per cent. of such boys. 1·7 per cent. had either a mild attack of dysentery or were convalescing from an attack. 1·4 per cent. either gave a history of a recent attack of measles or actually had it at the time of inspection. 20 boys had recently suffered from diphtheria and 67 similarly from smallpox. 75 were found either suffering from whooping cough or give a history of recent attack. 67 per cent. of the total number of students examined were found suffering from bodily defects. Again in the case of 67 per cent. of these defectives, the defect was such as required immediate notification to their parents or guardians. Further if the number of those that had poor physique without any particular disease, were to be added to the total defectives, the grand total would amount to about 92 per cent. of the total number examined.

Average vital capacity.—The average difference between expiration and inspiration of all the boys inspected is tabulated in inches below at particular ages:—

Ages.	Inches.	Ages.	Inches.
5	1½	13	2·2
6	1¾	14	2·2
7	1¾	15	2
8	1·8	16	2·2
9	1·9	17	2
10	2·6	18	2
11	2·2	19	2
12	2·1	20	2

Sanitary condition of institutions visited.—49 out of the 159 schools visited had insufficient floor space, 11 were improperly ventilated, 36 insufficiently lighted, 60 had no playground, while 59 had neither privies nor urinals. In Asansol Mining area most of the primary schools had no buildings of their own.

School Hygiene Work in Rural Health Circles in 1930-31.—This year a beginning was made in school hygiene work in primary schools within the jurisdiction of the newly started rural health circles. The work was entrusted to the Sanitary Inspectors in charge of these circles under the supervision of District Health Officers. The Sanitary Inspectors not being qualified medical men could not be expected to carry out the work in its full detail. The particulars of the work done by them under various headings as far as reported by them are given below:—

In the district of Pabna 35 schools situated in 10 health circles were visited and 912 scholars were inspected, of whom 311 had enlarged

spleen, 14 enlarged liver, 99 malnutrition, 70 vermin infestation and 100 bad clothing.

In the Shibganj health circle in the district of Bogra 4 schools were visited and 94 pupils were inspected, out of whom 17 had enlarged spleen, 12 malnutrition, 16 vermin infestation and 2 bad clothing.

In the district of Chittagong in 12 health circles 70 schools were visited and 2,360 scholars were inspected, out of whom 240 had enlarged spleen, 520 malnutrition, 31 unvaccinated, 63 had vermin infestation and 481 bad clothing.

In the district of Malda 148 schools were visited and 4,982 scholars were inspected, out of whom 1,827 had enlarged spleen. Other conditions are not reported.

In the district of Jessore 675 schools were visited and 17,548 scholars were inspected, out of whom 14,224 had enlarged spleen, and 1,158 were not vaccinated. Other conditions are not reported.

In the district of Bankura 7 schools situated in 3 health circles were visited and 396 scholars were inspected. Out of these, 227 had enlarged spleen, 10 malnutrition, 34 vermin infestation and 2 bad clothing.

A large number of scholars were inspected by the Sanitary Inspectors in the districts of Burdwan, Murshidabad and 24-Parganas; but their conditions are not reported.

The following table shows the amount of school hygiene work done in rural health circles:—

District Boards.	Schools visited.	Pupils inspected.	Enlarged spleens.	Enlarged livers.	Malnutrition.	Unvaccinated.	Vermin infestation.	Bad clothing.
Pabna ..	35	912	311	14	99	..	70	100
Jessore ..	675	17,548	14,224	..	..	1,158	..	..
Malda ..	148	4,982	1,827	..	..	..	..	..
Chittagong	70	2,360	240	..	520	31	63	481
Bogra ..	4	94	17	..	12	..	16	..
Bankura ..	7	396	227	..	10	..	34	2
Total	876	26,292	16,846	14	641	1,189	183	583

Besides the inspection work, the Assistant Director of Public Health, School Hygiene, examined 76 plans for educational institutions and reviewed 66 books on hygiene for the Provincial Text-book Committee. The School Hygiene Branch also organised dai training classes throughout Bengal which were inspected from time to time by the Medical Inspector of Schools in his tours. The Branch also assisted at the Annual Baby Week Exhibition, Calcutta, by opening a stall at the Indian Museum dealing with school medical inspection work and arranged practical demonstrations of school medical inspection work in all the schools in which school medical officers were newly appointed.

79. **Dai training.**—The Government allotment of Rs. 15,000 was distributed among 24 district boards, 21 municipalities and the Saroj

Nalini Dutt Memorial Association. The district boards of Jessore, Khulna and Bakarganj each started an additional class over and above those for which grants-in-aid were sanctioned for them. The district board of Rajshahi and the Bhatpara, Bogra, Narayanganj and Chittagong Municipalities could not start any class. 98 classes were held during the year and 1,113 dais trained by 96 lecturers, all local registered medical practitioners. 605 certificates and 919 bags were distributed to the trained dais during the year.

80. Educational Propaganda and Publicity.—During the year 426 lectures were delivered by Rai Bahadur K. P. Ray and Babu Shambhu-nath Banarji with and without the aid of lantern slides. The two publicity assistants also delivered 60 lectures during the year. The extensive health propaganda carried out by the publicity staff had obviously the effect of stimulating various district boards to organise their own propaganda department under their respective District Health Officers—Rajshahi, Burdwan, Jalpaiguri, Bankura and Malda. The first two maintain special propaganda officers, the third a small cinema outfit with a malaria film, Bankura has already a cinema machine but borrows films while Malda possesses a fully equipped staff with machine and five health films. It is expected that with a better financial outlook all the district boards and municipalities will give facilities to their health officers to enter for the British Empire Challenge Shield Competition.

The increase from 78 in 1929 to 130 Health Welfare Exhibitions in 1930 is a clear index of the popularity of the movement. General exhibitions in which health formed only a part dwindled to 35 in 1930 as compared with 61 in 1929.

A liberal supply of leaflets, charts and pictorial posters have always been given to the organisers of health exhibitions and whenever possible officers of the publicity staff have been deputed for lectures and demonstrations. More than 20,000 leaflets and pamphlets were reprinted and 220,000 on various preventable diseases were newly printed in Bengali, Hindi, Urdu and English and the total number distributed amounted to several lakhs.

As in other previous years the Bengal Public Health Department participated in fitting up a health exhibition car in the Eastern Bengal Railway Demonstration Train. The train travelled 880 miles visiting 16 stations. The Health Car was very well patronised. More than 84,000 people including ladies visited it, children under 14 years being left out of account. Hundreds returned disappointed in not being able to gain admittance into the Car. In the evenings the cinema attracted huge crowds and it may roughly be said that more than five lakhs of people attended throughout the itinerary. The Calcutta Health Welfare Week Committee again enlisted the aid of the publicity branch in organising their exhibition in the Indian Museum building.

The stock of magic lantern slides was replenished and 60 sets of tinted slides were renewed. The department possesses 26 sets of films comprising 32 reels on various preventable diseases. A new interesting addition was an Italian film on malaria in five reels. In all, 60 cinema shows were given during the year.

81. Fairs and Festivals.—No case of infectious disease was reported from any other fair held in the province during the year 1930 except from the Ganga Sagar Mela.

Ganga Sagar mela.—It was held on the 13th, 14th and 15th of January 1930 and was attended by more than 50,000 pilgrims, 23,861 arriving there by steamers and the rest by roads and boats. Usual arrangements were made for embarkation and disembarkation. No case of any infectious disease was reported to have occurred on the down journey. One cholera patient is said to have been brought to the island by steamer. Arrangements for water-supply were made by the Assistant Engineer, Public Health Department. Conservancy arrangements were the same as in the previous year. Articles of food were inspected regularly by the District Health Officer in charge of the fair and his staff and those found unwholesome were destroyed with the consent of the owners. A show room was decorated with posters, charts and models and Dr. Brahmachari of the Bengal Public Health Department gave demonstrations to the pilgrims.

Control of infectious diseases.—There was a pukka ward for cholera and temporary huts were erected for segregation of cases of smallpox, dysentery and other infectious diseases. An outdoor dispensary with observation sheds was also opened and 567 patients were treated there. There were 6 attacks and 3 deaths from cholera at the mela grounds. One of these was brought to the island from steamer, while the remaining 5 cases occurred among boat pilgrims. 375 inoculations against cholera were performed on the island. Volunteers from the Bajrang Parishad, Srikrishna Parishad, Khidirpur Seva Samiti, Astanga Ayurveda Samiti and the Association of medical volunteers from the Carmichael Medical College were on scout duty to pick up infectious disease patients. There was one case of chickenpox, but none of smallpox. The appended statement shows the possible role played by the Sagar mela in the spread of cholera in the adjoining districts :—

Localities.	Cholera deaths in the week ending—												Remarks.	
	7th December 1929.	14th December 1929.	21st December 1929.	28th December 1929.	4th January 1930.	11th January 1930.	18th January 1930.	25th January 1930.	1st February 1930.	8th February 1930.	15th February 1930.	22nd February 1930.		
Midnapur	23	34	30	73	41	39	75	49	33	60	33	36	217	211
Howrah	53	58	110	57	45	24	40	59	19	29	33	31	294	171
24-Parganas	56	50	64	42	40	83	25	47	47	96	84	87	279	361
Diamond Harbour .. ..	..	..	1	3	3	5	3	..	3	..	..	..	12	3
Kakdwip .. ..	..	..	..	..	..	3	1	5	3	4	24	1	3	37
Sagar	3	..	..	..	..	..	..	2	4	10	7	14	..	37
Calcutta	40	36	28	27	9	26	28	21	23	38	45	27	126	154
Khulna	120	47	59	39	17	12	19	6	6	4	7	1	174	24

The mortality for the week ending the 18th January cannot be much influenced by the pilgrims returning from the Sagar Mela. Want of a strong positive correlation is an evidence in favour of the sanitary arrangements made by the district board.

82. Septic Tank Latrines.—(a) The plans of the following septic tank latrines and activated sludge plants were approved during the year 1930.

(i) *Septic tank latrines.*—(1) New Jute Mill, Bansbaria, (2) Standard Oil Company, Budge-Budge, (3) Calcutta Electric Supply Corporation, Garden Reach, (4) Mafatlal Gagalbhai (modified plan) Sijbaria (mill), (5) Mafatlal Gagalbhai, Sijbaria (cooly lines), (6) Premchand Jute Mill, Chengail (mill), (7) Premchand Jute Mill, Chengail (cooly lines), (8) Jessop & Co., Workshop (Dum-Dum) and (9) Western India Match Company's Factory, Dakhineswar.

(ii) *Aerobic plants.*—(10) Alexandra Jute Mill, Shamnagar and (11) Shalimar Paint Works.

Plans have since been received of the unregistered activated sludge plant at the East Indian Railway, Lillooa Workshop.

(b) *Samples of effluents analysed and action taken.*—During the year under review, 1,656 samples of effluents were analysed at the Bengal Public Health Laboratory—571 bacteriologically and 1,085 chemically. Leaving out the bacteriological samples collected from the Titagarh Sewage Works, 173 samples out of 450 or 38 per cent., were found bacteriologically unsatisfactory and 52 per cent. were found sterilised on treatment with chloride of lime or like disinfectants.

(c) *Titagarh Sewage Works.*—Periodical samples were collected and sent up to the Public Health Laboratory for chemical and bacteriological examination. The quality of the effluent was found to be satisfactory chemically, but the bacteriological standard of purity had not yet been reached. Simplex activated sludge plant is being used and a similar third unit had to be added to cope with the increased amount of sewage treated at the works.

(d) *Health Propaganda Work.*—Mill Managers were advised to carry on health propaganda work and to utilise the help given by the Government Public Health Department through its publicity branch. In several mills, cinema health films were exhibited, magic lantern lectures on sanitation arranged and suitable hygiene notices exhibited in latrines and urinating places. In most of them, popular talks on hygiene were given by the sanitary inspectors employed in mills. This propaganda is especially necessary in view of the fact that the open surface drains and urinals are often used for latrine purposes and their surface washings, containing faecal matter, get mixed up with the sterilised filtered septic tank effluents which are finally discharged mostly into the river. Thus the final septic tank effluent, though rendered innocuous by proper treatment, gets grossly polluted by this direct contamination with the untreated faecal matters.

(e) *Nuisances.*—The mill authorities were advised through the Chief Inspector of Factories in about 100 cases to remove unsatisfactory conditions and defects. In addition to this, the authorities concerned of the King George's Docks, Police Hospital, Bengal-Nagpur Railway

Office, Gondalpara Jute Mill and the Ishapur Rifle Factory were advised direct. Complaints of nuisance of bad smell were attended to in the Ludlow Jute Mills, Western India Match Factory at Dakhineswar and Brace Bridge Road septic tank at King George's Dock, and remedies were recommended for removal of the defects found.

(f) *Improvements.*—New dosing chambers for sterilisation of effluents were constructed in several cases where they were non-existing and improvements suggested and carried out for better chlorination in others. Cleansing of septic tanks where there were deposits of excess sludge and filling in and paying attention to filter beds where necessary were also recommended. Masonry tanks on the top of which workers used to sit to cleanse themselves after defæcation and thus grossly polluted the water were pulled down in many places and filtered or deep tube well water pipe lines with suitable taps provided instead.

II.—Rural Sanitation and Public Health.

[*Extracts from the Annual Reports of the District Health Officers.*]

1.—Burdwan.

Vital Statistics.—11,570 births out of a total of 36,310 and 8,573 out of 33,817 deaths were checked by the members of the rural public health and vaccination staff and 94 omissions of births and 65 of deaths were detected. In 33 cases chaukidars were fined. The low births-rate for the year was due to defective registration.

Dais.—35 dais were trained in 1930 against 43 in 1929 and 60 in 1928.

Anti-malaria operations.—Malaria prevailed in the district as usual. Malaria cases were treated at the 22 district board dispensaries, 25 union board dispensaries and 19 others. There were 114 anti-malaria societies in the district of which 56 that were registered received combined Government and district board grants of Rs. 9,750 for anti-malaria work on approved lines. 108 lbs. of quinine worth Rs. 1,987-14 supplied free by the Government were distributed free through anti-malaria societies, health circles and union boards.

Cholera and smallpox.—These prevailed in an epidemic form in all the thanas and became widespread from village to village through contacts, although many cases were imported from foreign districts and fairs and festivals held outside the district. Prompt measures were adopted to arrest the progress of the diseases by mass inoculation and vaccination, respectively. Railway stations were also watched to detect these diseases amongst the pilgrims. 339 wells and 1,345 tanks were disinfected.

Food adulteration.—5 Sanitary Inspectors were authorised to take samples and to prosecute vendors. 23 prosecutions were started, of which 10 ended in convictions, 8 were still pending at the close of the year and 5 could not be proceeded against in accordance with the Public Analyst's certificate.

Health circles.—The district was provided with the full number of health circles which were maintained throughout the year and which rendered valuable service chiefly in connection with anti-cholera and anti-smallpox work.

Leprosy.—Leprosy patients were treated at Raniganj, Rajband and Dishergarh centres in the Asansol subdivision.

2.—Asansol Mines Board of Health.

Vital statistics.—8,032 births with a birth-rate of 24 per 1,000 were registered in 1930 against 8,934 and a rate of 27 per mille in 1929 showing a slight decrease. There were 6,980 deaths against 7,644 during the previous year. To ensure recording of all births in the settlement, the Board's investigating staff on their rounds paid frequent visits to President Panchavets and other educated villagers and requested them to impress upon their fellow villagers the necessity of recording the vital occurrences.

Infantile mortality.—This was 129 per mille against 145 in the previous years. 1,038 infants under one year died during the year. 711 children between 1 and 5 years of age died against 742 in 1929, giving a death-rate of 89 per 1,000 against 88 in the previous year. The total number of births and deaths was checked but no omission was detected and hence no prosecution was instituted.

Sanitary works.—Endeavours were made to improve the drainage of the bazar areas. Scavenging system was introduced in all the bazars and some important villages to improve their sanitary condition.

Malaria.—1,694 deaths against 1,351 in 1929 were due to fevers. The total mortality from this cause doubled itself in the course of 4 years. A large proportion of these deaths is supposed to be due to malaria, thus indicating a steady rise in the incidence of this disease in the settlement. The Board employed a staff of three anti-malaria investigators who carried on investigation when outbreaks of malaria were reported and took necessary remedial measures.

Smallpox.—There were 170 cases with 20 deaths (death-rate .06 per mille) in 1930 against 354 and 42 respectively in 1929.

Cholera.—453 cases with 207 deaths and a death-rate of 0.63 per mille occurred from this cause against 1,076 with 537 deaths in 1929. The spread of the disease was in all cases successfully prevented by various routine measures—disinfection and the administration of the Essential Oils cholera mixture. Inoculation with anti-cholera vaccine was for the first time introduced this year in the settlement. During the hot and rainy seasons wells in the collieries of the Settlement were regularly sterilised with bleaching powder and the infected village tanks when necessary.

Beri-beri.—It appeared in epidemic form during the first quarter of the year and showed signs of subsidence from the second quarter. 108 cases with 2 deaths were reported to have occurred during the year.

Influenza.—There were 1,738 cases of influenza in the colliery area. 2 deaths from this cause were reported in the whole of the settlement.

Snake-bite.—12 deaths were reported from snake-bites in 1930 against 20 in 1929.

Midwives.—The Board maintained a staff of three midwives to render gratuitous assistance to the married women of the settlement before, during and after confinement. They also went round the villages and collieries and delivered lectures on maternity and child welfare amongst the women folk.

School inspection.—The medical inspection of the school children was regularly carried on by the Board's Sub-Assistant Surgeon in charge of school hygiene, and the Board's propaganda officer delivered magic lantern lectures in the villages and the collieries.

Food adulteration.—The provisions of the Bengal Food Adulteration Act will be put into operation as soon as the amendments authorising the Board's officers to exercise powers and to perform duties mentioned in sections 10 and 12 of the Act are published by the Government.

3.—Birbhum.

Vital statistics.—52 omissions of births and 17 of deaths were detected by the checking staff out of 1,616 births and 2,187 deaths examined during the year.

Infantile mortality.—The high rate of deaths among infants 202.2 per 1,000 was due to (1) ill health of expectant mothers, (2) want of nourishing diet before and after delivery, (3) delivery by untrained dais and (4) ignorance of the mother in rearing up the children.

Dais.—More than 200 dais were trained during the year.

Sanitary works.—No important sanitary works were done except that of cleaning of the rural areas and obliteration of insanitary dobas by some of the Union Boards and anti-malaria societies. Tube-wells were sunk at Nanur, Rampurhat and Kirnahar.

Anti-malaria operations.—There was a large increase in the mortality from malaria, which prevailed severely from October to December especially in Sadar subdivision. Quinine Sulphate and cinchona tablets were distributed through the Presidents of Union Boards, vaccination staff and officers in charge of rural health circles. Doctors were deputed to the affected localities for free treatment. Grants were made to union boards for kerosinisation, filling up dobas and clearing jungles; tanks and ditches were kerosined for larvæ destruction. 28 anti-malaria societies treated malaria cases, kerosined tanks and ditches, cut jungles and filled up insanitary collections of water. Sanitary Inspectors and Assistant Health Officers gave magic lantern demonstrations.

Smallpox.—There were 165 deaths against 74 in 1929. Rajnagar Bolpur, Dubrajpur, Sainthia and Illambazar thanas suffered most. Suri town, Nalhati and Murarai thanas were free from the disease.

Cholera.—600 deaths occurred against 794 in 1929. Rampurhat, Murarai, Maureswar, Nalhati, Nanur, Illambazar and Khairasol thanas

suffered most. Suri town was free from the disease. 69 wells and 582 tanks were disinfected.

Food adulteration.—All the Sanitary Inspectors and Assistant Health Officers were empowered to take samples.

Leprosy.—Anti-leprosy measures consisted in the establishment of 17 leper clinics and treatment of 691 new patients.

4.—Bankura.

Vital statistics.—No omission of birth or death was detected out of 110 births and 125 deaths examined.

Infantile mortality.—The infantile mortality has increased probably due to increase in malaria.

Sanitary works.—No important work of drainage or filtered water-supply was carried out.

Anti-malaria operations.—The unusual and untimely rainfall caused a great increase in the number of malaria fever cases even in the healthier parts of the district. Cases of malarial fever were treated by the District Health Officer and the doctors. Quinine and cinchona were distributed especially in the affected areas, through the Health Officer and his staff helped by the school teachers and Presidents, of Union Boards.

Smallpox.—It accounted for 236 deaths against 35 in the previous year. It broke out in epidemic form in Vishnupur and Sonamukhi Municipalities in the latter part of the year.

Cholera.—The total number of deaths was 570 against 1,188 in 1929. There were sporadic cases of cholera throughout the district, mostly enteritis due to scarcity of good drinking water, and mild form of epidemic in thanas Chhatna, Saltora, Raipur, Onda and Jaypur. Ordinary timely measures controlled the disease within a short time. 252 wells and 320 tanks were disinfected. Cholera was also epidemic in Vishnupur and Sonamukhi Municipalities.

Food adulteration.—All the Sanitary Inspectors excepting that of Ranibandh have been authorised to take samples.

Leprosy.—3 leprosy treatment centres were started by the District Board, but these are quite insufficient to cope with the large number of cases of this disease in the district. The Wesleyan Mission maintains a leper home in Bankura town.

5.—Midnapur.

General health.—In the towns there was a general decrease in cholera and fever, slight increase in smallpox in Ghatal and Chandrakona, increase in diarrhoea and dysentery in Midnapur, Kharar and Ramjibapur. In the rural areas, cholera decreased, with very slight increase in smallpox and a continuance of decrease in fever deaths.

Vital statistics.—There was a general decrease in the registration of births, due to resignation of a number of chaukidars owing to Civil Disobedience movement. In the healthiest thanas of Contai and Tamluk subdivisions, where this movement was most powerful, 5,737 and 2,617 less births respectively were recorded than the previous year. There was slight increase in death-rate in Midnapur and Ramjibanpur municipalities due to diarrhoea and dysentery. In the rural areas it continues to decrease, except slight increases in thanas Gopiballabhpur and Nayagram due to influenza, in Jhargram due to fever, in Sutahata due to cholera and diarrhoea and in Potashpur due to cholera, diarrhoea, dysentery and fevers. 60 omissions of births and 16 of deaths were detected out of a total of 3,314 and 1,891 cases respectively examined.

Infantile mortality.—The high percentage of infantile mortality 17.7 compared with 15.9 in the previous year is due to decreased registration of births.

Dais.—30 dais were trained from 3 centres in thanas Debra, Sabang and Ramnagar.

Anti-malaria operations.—25 anti-malaria societies worked during the year. The public health staff, 31 epidemic doctors and 3 kala-azar centres among themselves treated 44,452 new malaria cases and distributed quinine and cinchona. 114,212 malaria patients were treated and 521 lbs. of quinine and cinchona consumed by the dispensaries.

Smallpox.—In towns 4 deaths and in rural areas 286 were registered against 1 and 199 respectively in the previous year. Smallpox was particularly prevalent in Daspur, Tamluk, Panskura, Garbeta, Chandrakona and Ghatal thanas.

Cholera.—In towns 37 deaths occurred against 109 in the previous year. It was chiefly prevalent in Tamluk. In rural areas 2,827 deaths were registered against 3,808 in 1929. 44.9 per cent. of the total deaths occurred in Tamluk subdivision, 28 per cent. in Contai subdivision, 16.9 per cent. in thana Danton, and 8 per cent. in Ghatal subdivision. A large number of people migrate as labourers from Contai and Tamluk subdivisions to Sundarban tracts in 24-Parganas in October and November; some of these contract cholera there and on their return start the outbreak in Midnapur district by contaminating tanks and water-courses. 8,153 tanks, wells, rivers and houses were disinfected.

Food adulteration.—20 sanitary inspectors have been empowered to take samples.

Leprosy.—A partial survey of leprosy cases was made in Gopiballabhpur thana by Dr. Ghosh of the Bengal Branch of the British Empire Leprosy Research Association, while a regular survey of Salboni thana was undertaken by the survey party deputed by the same association towards the end of the year. It was found that 1 in 50 of the population in the latter thana was affected with leprosy. The dispensaries treated 223 leprosy patients.

Working of the Rural Public Health Organisation.—From the working of the last 3 years (1927-28, 1928-29 and 1929-30) it appears that the introduction of the Rural Public Health Organisation has effected general improvement of the health of the district as could be ascertained from the health barometer—the vital statistics of the

district. Before the introduction of the scheme up to the year 1927 the following thanas showed decaying population:—

Thanas.	Years.									
	1926.		1927.		1928.		1929.		1930.	
	Birth rate.	Death rate.								
Patashpur	..	30·6	32·3	29·8	32·6	+	..	+	..	+
Kharagpur	..	9·7	16·7	20·1	20·1	+	..	+	..	+
Danton	..	38·05	42·8	26·7	29·2	+	..	+	..	+
Debra	..	22·6	30·18	17·12	24·3	20·5	31·9	+	..	+
Naraingarh and Kessiary	44·9	45·2	27·5	34·6	+	..	+	..	+	..
Sabang and Pingla	26·1	35·3	29·8	34·3	26·6	29·2	+	..	+	..
Ghatal	..	25·9	29·4	24·8	29·3	±	..	+	..	+
Chandrakona	..	29·5	39·2	24·7	26·08	+	..	+	..	26·3 28·4
Daspur	..	28·4	33·1	21·6	30·1	25·9	31·8	+	..	+
Panskura	..	25·3	25·9	20·9	24·4	+	..	+	..	+
Midnapur	..	+	—	24·3	25·8	+	..	+	..	+
Keshpur	..	+	—	23·6	26·5	+	..	+	..	+

Thus in 1929 there was no decaying area in the district, all having recouped. In 1930, there is only one thana, Chandrakona, which has registered much less birth than in the previous years, death remaining same. This year owing to the Civil Disobedience movement there were resignations of a large number of chaukidars in the district and hence the registration of vital statistics was most irregular for a few months. The general death-rate in the district has improved as follows:—

1926	..	..	..	..	25·3
1927	..	..	..	..	25·1
1928	..	..	..	..	24·3
1929	..	..	..	..	21·81
1930	..	..	..	..	21·1

Reporting of epidemics.—This has very much improved and is chiefly responsible for the gradual decrease in the death-rates from cholera and smallpox.

Death rate from—	1926.	1927.	1928.	1929.	1930.
Cholera	1·3	1·2	2·3	1·4
Smallpox	·84	1·8	1·3	·07

6.—Hooghly.

Vital statistics.—The lower birth-rate (24·53 against 26·32 in 1929) is accounted for by defective registration, low vitality of the people and immigration of families from the rural areas to towns. 11 omissions

of births and 5 of deaths were detected out of 2,242 births and 1,790 deaths examined. The defaulting chaukidars were reprimanded. 19 cases were instituted against the parents or guardians and 17 persons were convicted.

Infantile mortality.—The high incidence of mortality among infants (4,054 against 3,981 in 1929) was due to malaria, smallpox, tuberculosis, pneumonia and diarrhoea, supplemented by absence of trained midwives, low vitality of the people and scarcity of milk. Baby week and health exhibitions were held at Debanandapur and Hooghly. Treatment was given in 58 regular dispensaries, 5 special centres and 14 voluntary centres.

Dais.—10 dais were trained at Mohanad centre in 1930.

Sanitary works.—200 tube-wells were sunk during the year.

Anti-malaria operations.—Cleaning of tanks, filling up ofdobas and pits, cutting of jungles and drains were carried on by 85 co-operative anti-malaria societies and 126 union boards. Part of the river Saraswati was cleaned in Singur and Chanditola thanas through voluntary labour.

Smallpox.—Smallpox prevailed in Bararambha and Haripal police-stations in March and in Barabaria and Uttarpara police-stations in August. No information was received about the March epidemic till the sanitary inspector discovered it in the course of his tour. The August epidemic was imported from Calcutta.

Cholera.—It prevailed in epidemic form at Baliachak and Dhanyagori in Khanakul police-station in April and October respectively and at Kotalpur in Pursoora police-station in May. 167 wells and 540 tanks were disinfected.

Food adulteration.—All the sanitary inspectors were authorised under sections 10 and 12 to take samples.

Rural Public Health Organisation.—7 public health circles were started during the year, thus completing the 15 circles in this district.

7.—Howrah.

Vital statistics.—The birth-rate was 19·6 per mille against 27·8 in 1929. Defective registration is partly responsible for the low birth-rate. 78 omissions of births and 9 of deaths were detected out of 1,374 births and 856 deaths examined. The defaulting chaukidars were prosecuted. One person was convicted under the Bengal Births and Deaths Registration Act.

Sanitary works.—12 new tube-wells were sunk and 15 resunk.

Anti-malaria operations.—In 1930, a few anti-malaria societies were organised and 2 registered. The latter got special provincial and district board grants for water-supply and drainage, besides free supply of quinine and cinchona tablets and mixture.

Cholera.—Cholera broke out in the early part of the year in a virulent form practically in all the thanas except Bauria in the Uluberia subdivision, but timely precautions checked the epidemic. 1,089 tanks were disinfected.

Food adulteration.—Only the Assistant Health Officer has been empowered to take samples.

8.—24-Parganas.

Vital statistics.—In all the thanas, the number of births was greater than that of deaths except in Bijpur and Habra thanas. 482 omissions of births and 72 deaths were detected out of 5,188 births and 2,103 deaths examined. Several chaukidars were prosecuted.

Dais.—26 dais were trained at 2 centres, one at Bhangor in Sadar and the other at Kotra in Barasat subdivision.

Anti-malaria and anti-kala-azar operations.—Work was carried on in 38 main centres and then 69 sub-centres and in 10 dispensaries with 18 sub-centres under them. The Government non-recurring grant of Rs. 5,000 with the District Board contribution of Rs. 2,500 were distributed among 72 union boards and 19 registered anti-malaria societies and Health Associations.

Cholera.—It appeared in an epidemic form in Jaynagar, Bistupur, Canning, Baruipur, Bangor and Pratapnagar thanas in Sadar, Harsa, Hasnabad and Sandeskhali in Basirhat, and almost all the thanas of Diamond Harbour subdivision. Ordinary measures carried on by the sanitary inspectors helped by the peripatetic doctors controlled the epidemic. General ignorance of the people and the widespread scarcity of drinking water in the rural areas, combined with deficient rainfall were the chief causes of the outbreak. 36 wells and 681 tanks were disinfected.

Food adulteration.—11 sanitary inspectors were authorised to take samples. Six samples were seized and Rs. 15 were realised as fine from the vendors.

9.—Nadia.

General health.—Abnormal rainfall (4 inches above normal) in the dry months of March and April in Kushtia was followed by a sudden and widespread epidemic of cholera in that subdivision especially in Kumarkhali police-station. Mortality under smallpox and cholera was lower than in 1929; fever deaths showed a notable rise in Kushtia subdivision. Infant and child mortality closely followed fever mortality. Malaria prevailed in virulent form in the Meherpur subdivision.

Vital statistics.—The abnormally low birth-rate (27.2 per mille) was largely due to heavy incidence of malaria in the preceding quinquennium and partly to defective registration owing to temporary slackness in some union boards. The urban birth-rate was only 17.6 against 23.7 of the previous year. 36 omissions of births and 20 of deaths were detected out of 1,918 births and 966 deaths examined. There were 21 prosecutions of which 18 ended in conviction.

Infantile mortality.—The infantile mortality showed an increase over the preceding year. This increase was due especially to heavy incidence of malaria followed by an abnormally low birth-rate. An exhibition on health welfare work was held at Utholi.

Dais.—20 dais were trained at Utholi centre.

Anti-malaria operations.—Minor anti-malaria works were carried out by health circles, union boards and health societies. Each sanitary inspector was provided with a spraying machine and sufficient pesterine for regular weekly kerosinising of mosquito-breeding places, and sufficient quinine for regular treatment of selected children in two selected villages within his jurisdiction to be set up as "model villages." 1,076 dobas were kerosined, 94 acres of jungle cleared, 16 dobas filled up, 8,648 yards of drains cut and 12,609 malaria patients treated by 24 union boards and societies and 25 health circles. Special anti-malaria work was carried out through Birnagar Palli Mandali in the suburbs of Birnagar.

Anti-kala-azar work.—It was carried out by 46 dispensaries, 3 special centres, one subsidised centre and 4 anti-malaria societies. 4,086 cases were treated.

Smallpox.—There was an epidemic of smallpox in village Jatarpur, police-station Meherpur, in February 1930 but the fact was reported in March when the epidemic was in full swing. Out of 850 persons in the village 125 were attacked with smallpox and 17 died. 70 marriages took place in the same village in March to avoid the operations of Sarda Act and a number of bridegrooms were present there at the time. The epidemic subsided quickly after thorough vaccination and revaccination of the remaining population including the bridegrooms present. 159 cases of smallpox were treated with Xylol of which 143 were cured. 7 thanas were entirely free, while in others it was sporadic.

Cholera.—2,577 deaths occurred in 1930 in rural areas, of which 1,170 were registered in Kumarkhali police-station alone. The epidemic in Kumarkhali suddenly broke out at the end of March simultaneously affecting more than 50 villages and suddenly subsided at the end of April. There were 1,134 deaths in about a month. The outbreak was so very sudden and widespread that the epidemic could not be said to be due to polluted water, since there was no source of water-supply common to all or most of the villages. It was observed that the epidemic followed an abnormal scanty shower of rain; its sudden and widespread nature might lead to the suspicion of its being algid malaria. 10,888 wells, 440 tanks and 1,411 river ghats were disinfected. Of the 38,371 persons inoculated, 95 were attacked with cholera, against 74,948 and 162 respectively in the previous year.

Rural health circles.—All the thanas were provided with sanitary inspectors by February, 1930.

Food adulteration.—All the sanitary inspectors were authorised to take samples. They collected 486 samples during the year, of which 56 per cent. proved to be adulterated.

School medical inspection.—81 children were examined by District Health Officer at Majdia High English School.

10.—Murshidabad.

General health.—Cholera and smallpox mortality were both lower and malaria much higher than the preceding year, the latter due to the late abnormally heavy rains during November. Mortality from respiratory diseases was also higher due possibly to the ill-clad condition of the people.

Vital statistics.—The general birth-rate 38·7 was much higher than the provincial rate. The vaccination staff did not check a single birth or death. The rural public health staff checked 553 births and 377 deaths but did not find any omission either of birth or death.

Dais.—50 dais were trained in 5 classes.

Anti-malaria operations.—2 anti-malaria co-operative societies were registered, but no new one was established. The epidemic of malaria was more severe than that of the previous year.

Kala-azar.—264 cases were treated at special centres, 575 at voluntary centres and 2,752 at the dispensaries.

Smallpox.—Mortality was very much lower than the decennial average, considerably lower than the previous year. There were sporadic cases.

Cholera.—There were sporadic cases of cholera throughout the district, but the disease assumed epidemic form in Kandi town and rural area and in Bharatpur rural. Police-station Khargram also suffered. The disease broke out in Kandi town whence it spread to Bharatpur and Khargram. 1,836 wells, 2,324 tanks and 3,236 houses were disinfected.

Food adulteration.—All the sanitary inspectors were authorised to take samples. 358 food samples were seized; of these 111 were found adulterated and 236 cases were pending. The quality of milk, ghee and mustard oil has improved considerably due to this activity.

11.—Jessore.

Vital statistics.—General unhealthiness and malaria were the main causes of the low birth-rate (19·32 during 1930 against 23·26 in 1929). The increased death-rate in rural areas was also due to the same causes in general. 45 births and 40 deaths were detected as unregistered out of 1,892 and 1,807 cases respectively, examined during the years. The chaukidars concerned were fined in a few cases. 3 persons were prosecuted and convicted under the Bengal Births and Deaths Registration Act.

Infantile mortality.—The infant mortality rate was 203·4 per mille of births against 193·47 in the previous year.

Dais.—50 dais were trained at 5 classes.

Sanitary works.—250 tube-wells were sunk in the district in 1930.

Anti-malaria operations.—Malaria prevailed in epidemic form. The dying rivers—the Bhairab and the Chitra—being silted up and choked with water-hyacinth are hot beds for breeding of anopheline mosquitoes, which attacking the carriers who are open to their attacks, become infected themselves and in their turn reinfect healthy persons. There were 8 anti-malaria societies. Quinine and cinchona supplied by the Government were distributed free by the sanitary inspectors. Anti-malaria operations were carried out by some union boards under the supervision of the sanitary inspectors of respective health circles.

Kala-azar.—There were 443 deaths from kala-azar against 275 in 1929.

Cholera.—2,089 persons fell victim to cholera against 6,040 in 1929. It prevailed epidemically from January to May. Errors in detection, want of timely information, lack of good drinking water and use of polluted water and rotten things were the chief causes. 5,404 wells and 1,351 tanks were disinfected. Cholera prevailed to a small extent in Bongaon subdivision in the latter part of the year, when also four thanas out of five in Narail subdivision were similarly affected.

Food adulteration.—Samples of adulterated foodstuffs were seized and proprietors and sellers were prosecuted and fined. All the sanitary inspectors were empowered to seize samples.

12.—Khulna.

Vital statistics.—The birth-rate was 25.77 against 31.9 per mille in the previous year. This low rate was partially due to defective registration; possibly also the continuation of malarial sickness from previous years adversely affected the fecundity of the people. The death-rate 19.49 was the lowest since 1925. 103 omissions of births and 74 of deaths were detected out of 1,728 births and 1,275 deaths examined. Several chaukidars were fined.

Infantile mortality.—The high death-rate among infants under one year of age was principally due to lesser number of births during the year.

Anti-malaria operations.—The ravages of malaria and fevers in general were slightly lesser than in the preceding year. Although there was no epidemic, yet it prevailed severely. It was generalised throughout the district though some areas were less affected than other. In a deltaic saline district where land formation is rapidly going on and erection of bunds to prevent entrance of saline water into the fields is the order, the spread of malaria is the natural sequence. A few minor operations were carried out by one or two union boards. 30 new societies were registered during the year, thus making up a total of 185. Many societies ceased to function totally during the year. The working as a whole of anti-malaria societies and union boards accepting anti-malaria grants is as unsatisfactory as before. The power of inspection of such works by the sanitary officers is resented vigorously by union boards in general. Free distribution of quinine and cinchona amounting to 144 lbs. was systematically carried out through the various societies, kala-azar doctors and district board staff mainly the sanitary inspectors.

Kala-azar.—There has been a slight recrudescence of kala-azar during the year and the number of cases treated at the dispensaries have definitely increased over that of the previous year.

Smallpox.—The number of deaths from smallpox far exceeded those in the preceding year, and so the number of villages from where such deaths were reported. 41 villages reported 46 deaths in 1930 against 23 deaths in 16 villages in the previous year. The delayed notification was partly responsible for such high mortality in some cases.

Cholera.—There was a heavy fall in the mortality from this cause in comparison with the last 3 years. The system of notification by Presidents has improved to some extent and hence earlier actions have

been the cause of checking many a spread. Owing to the vigorous activities of the sanitary inspectors the disease could not have a chance to get a firm grip at any place. Possibly also the high degree of immunity afforded by a large number of inoculations in the previous year may be the principal inhibitory factor in 1930 to bring about such a low mortality. No definite origin of cholera could be traced, rather it may be said to be endemic in the district. 10 wells, 990 tanks and 1,114 houses were disinfected.

Food adulteration.—The sanitary inspectors had been empowered to collect samples since the latter part of 1929. Out of 328 samples seized, 184 were found to be adulterated on analysis. Excepting some cases of withdrawal, all were convicted, but the punishment has been so light in most cases that no deterrent effect could be expected.

13.—Rajshahi.

Vital statistics.—The birth-rate is falling off gradually in this district. The annual average births during the last decade (1911-1920) were 54,971, but the figure came down to 47,533 during the present decade, showing a reduction by 7,438 births annually or 74,380 for the whole decade. In the year 1930, however, this falling off amounted to 8,000. Malaria and venereal diseases, the latter contracted from prostitutes at the various fairs held in the district, are the chief causes of this low birth-rate. 86 omissions of births and 78 of deaths were detected out of 3,371 births and 3,373 deaths examined.

Infantile mortality.—Besides other general causes, malaria and venereal diseases in parents were chiefly responsible for high infant and child mortality. No baby show was held in the year under report.

Malaria.—There was an increase in the incidence of malaria in 1930. Malaria patients were generally treated at the District Board dispensaries, and by doctors of 14 groups of special kala-azar centres and at 3 epidemic camps. Quinine and cinchona febrifuge were distributed by the doctors of district board dispensaries, kala-azar centres and epidemic camps. Anti-malaria societies and 24 rural health circles also did anti-malaria works. Lantern lectures on "Malaria, its cause and prevention" were delivered by the sanitary inspectors.

Kala-azar.—28,887 kala-azar patients were treated free at the board's 67 kala-azar centres, 7,062 (938 new and 6,124 old) at the 28 centres attached to the district board dispensaries, 19,617 (2,774 new and 16,843 old) at the 39 special centres and 2,208 in private dispensaries. 1,357 wells and 151 tanks were disinfected.

Smallpox.—There were only 23 deaths from smallpox in 1930 against 448 in 1929 and 352, the average of the previous decade. 13 out of these 23 deaths occurred in Manda police-station alone. 20 deaths occurred during the first half of the year—the residue of the last year's epidemic.

Cholera.—648 deaths were registered from this cause in 1930 against 3,389 in 1929 and 2,656, the average of the previous decade. Medical officers of 32 medico-sanitary centres and sanitary inspectors of 24 rural health circles with their assistants as well as doctors of kala-azar centres took prompt preventive steps against the spread of the disease.

Rural Health Organisation.—The prompt action taken by the sanitary officers of the rural public health circles, resulting in the reduction in the number of deaths from cholera and smallpox as shown below, speaks for itself:—

Years.				Cholera deaths.	Smallpox deaths.
1927	..	..	..	4,180	296
1928	..	..	..	6,616	779
1929		..	..	3,389	448
1930	..	..	..	648	23
Decennial averages		..	..	2,656	352

Food adulteration.—Rural public health sanitary inspectors have been authorised to seize samples, but pending the recognition of the district public health laboratory by Government, no action could be taken.

14.—Jalpaiguri.

Vital statistics.—The birth-rate in town was higher and in rural areas slightly lower than that in the previous year; the death-rate was just the converse. 12 omissions of births and 11 of deaths were detected out of 772 births and 556 deaths checked.

Anti-malaria operations.—Quinine tablets were distributed free through the rural public health staff; supernumerary doctors and medical officers of the district board and aided dispensaries and by the staff of the Chaklajat Estates of Cooch Behar. A malaria survey was undertaken in the civil station of Kumargram thana during the year.

Kala-azar.—646 cases were treated in the hospital and dispensaries, 394 cases in the district board special kala-azar centres and 48 by the assistant health officers in charge of public health circles.

Smallpox.—15 deaths were recorded in 1930 against 42 in the previous year.

Cholera.—134 deaths occurred during the year against 221 in 1929. 6,201 wells and 2 tanks were disinfected.

Food adulteration.—All the sanitary inspectors and assistant health officers of the rural public health circles were empowered to seize samples. 73 samples of mustard oil, ghee, milk and butter were seized, of which 15 were found adulterated and 18 genuine.

15.—Darjeeling.

Vital statistics.—11 omissions of births and 1 of death were detected out of 382 births and 295 deaths examined. In the rural areas, the Bengal Births and Deaths Registration Act has been extended to Siliguri Union Board only.

Infantile mortality.—High rate of mortality among infants under one year of age was recorded in the Siliguri subdivision and was due to malaria.

Anti-malaria operations.—No anti-malaria operation was carried out in this district in 1930. Deaths from malaria were the highest in the Siliguri subdivision.

Smallpox.—There were 13 deaths against 132 in the previous year.

Cholera.—11 deaths were reported against 20 in 1929. The travelling sub-assistant surgeon visited many places where cholera cases had occurred and distributed medicines to people. 4 wells were disinfected.

Kala-azar.—158 persons died from this cause in the district. 68 deaths were recorded in the Siliguri subdivision and 41 in the Kalimpong subdivision.

Hookworm.—Hookworm is very prevalent in the hills. It is controlled in the tea garden areas but not in the khasmahals or in the municipalities.

Leprosy.—There is a certain amount of leprosy in the district. A leper hospital has been started at Kalimpong.

16.—Rangpur.

General health.—The number of deaths began to rise after the month of August, i.e., just after the close of the jute season when people failed to get their desired prices. Out of an aggregate of 55,202 deaths in the year, over 15,500 occurred in November and December alone.

Vital statistics.—The birth-rate (24·1 in 1930 against 26·56 in 1929) continued to decline steadily from 1928. This low rate was to a certain extent due to defective registration, and partly to increased unhealthiness among the females. The death-rate was also lowered to 22·0 from 23·0 in the previous year and was due mainly to fewer births and fewer infant deaths. The highest death-rate 36·4 was reported from Rowmari (Rahumari) and was due to devastation by earthquake, infant mortality and cholera epidemic. 109 omissions of births and 54 of deaths were detected out of a total of 2,672 births and 2,339 deaths examined. 3 chaukidars were departmentally fined.

Infant mortality.—The infant mortality rate was 221·8 against 211·2 per mille of births.

Anti-malaria operations.—218 lbs. of quinine were fully distributed through the different agencies and minor measures, namely, obliteration and kerosination of insanitary tanks anddobas, clearing of jungles, etc., were undertaken by six union boards and three registered anti-malaria societies.

Smallpox.—Deaths from smallpox totalled 492 against 849 in the previous year. Owing to the ignorance of village chaukidars, deaths due to chickenpox and other eruptive diseases were generally grouped in under this head.

Cholera.—Total deaths registered under cholera were 2,324 against 2,347 in 1929 and included a number of diarrhoea and dysentery deaths. It broke out epidemically in Rowmari and Ulipur thanas in Kurigram subdivision in the middle of October last due to scarcity of pure water and acute economic distress—the seven earthquakes of July having completely damaged all the local wells and the subsequent tempest totally destroying the crops. 11,422 wells were disinfected.

Kala-azar.—The board maintained 24 special kala-azar centres during the year, where 1,905 cases were treated.

Food adulteration.—The rural sanitary inspectors were empowered to seize samples in July and since then about 260 samples were seized and analysed at the local Public Health Laboratory. About 50 per cent. of these samples were found adulterated.

17.—Dinajpur.

Vital statistics.—The lower birth-rate per mille 27·06 against 28·0 in the previous year was due mainly to defective registration. 9 omissions of births and 10 of deaths were detected out of 2,084 births and 2,087 deaths examined. The ratio of deaths from all causes was 27·91 out of which 25·5 per mille deaths were due to fever, cholera and smallpox.

Infant mortality.—The rate was 228·08 per mille of births.

Anti-malaria operations.—Quinine supplied by the Government was distributed in the interior of the district where there is no dispensary. Lantern lectures were given by the Health Department of the Board. One anti-malaria co-operative society was formed at Raiganj and registered.

Kala-azar.—The number of deaths reported, 1,025 against 737 in 1929, was due to defective registration in the previous year and not to any increase in the mortality, since according to general opinion the disease has actually abated in this district and this is confirmed by the number of new admissions to the dispensaries. 3 special kala-azar centres have been continuing—one each in Raiganj, Ranisankai and Isabpur in Dhamoirhat thana.

Smallpox.—The mortality from this cause increased from 1926 to 1928, after which it began to decrease until the number of deaths was only 187 in 1930 compared with 1,639 in 1928.

Cholera.—The epidemic of cholera prevailed more or less throughout the year, the highest incidence occurring in April, January, March and June when 831 out of a total of 1,079 deaths were registered. All the thanas were affected except those of Hemtabad, Chirirbandar, Haripur, Birganj, Khansama and Kaharol. Pirganj and Raiganj, Thakurgaon and Baliakandi were responsible for 519 out of 1,074 deaths. In most cases it was imported but the mortality was heavy where the information was sent very late. The duration of the epidemic was prolonged by the refusal of the female contacts to be inoculated. 8 doctors, 33 sanitary inspectors and 1 sub-inspector of vaccination were deputed to cope with the epidemic. The anti-cholera inoculation is very popular in many parts of the district. The Musalman females were inoculated in a few places only owing to the strict purdah system prevailing. The intending pilgrims for Puri Rathjatra and Snanjatra festivals were also vaccinated. Arrangements were also made to keep watch over the passengers coming from Ganga Sagar fairs. 3,460 wells, 98 tanks and 680 houses were disinfected.

Food adulteration.—3 subdivisional sanitary inspectors and 5 rural health circle sanitary inspectors were empowered to seize samples. 49 samples in all were sent for analysis out of which 21 were found adulterated. All the cases instituted except one ended in conviction. The fines imposed were practically nominal and hence had no deterrent effect.

18.—Bogra.

Vital statistics.—The birth and death-rates were practically the same as in the previous year. The mortality was highest within the Gabtoli police-station as a result of increased malaria. 92 births and 6 deaths were detected as unregistered out of 3,034 births and 1,971 deaths examined.

Infantile mortality.—The ratio was 200·7 against 231·45 in 1929.

Sanitary works.—14 tube-wells were completed and in the case of 7 others the work was in progress.

Anti-malaria operations.—Quinine was extensively distributed through the rural health staff and the existing anti-malaria societies, which also carried out anti-mosquito measures such as the removal of water-hyacinth fromdobas and tanks, filling up ofdobas, jungle-cutting and reclamation of drains.

Smallpox.—It was practically absent in the district throughout the year.

Cholera.—Before the rains sporadic cases were reported from the Adamdighi and Dupchanchia police-stations and after the rains from the month of November from the Dhunot and Sariakandi police-stations. Experiments were carried out with combined cholera and dysentery bacteriophage brought from the Pasteur Institute, Shillong, for the treatment of cases of bacillary dysentery and cholera, and good results were obtained.

Kala-azar.—787 kala-azar patients were treated at the various dispensaries. From the mortality figures and other evidences it is found that the disease was slightly on the increase.

Food adulteration.—The sanitary inspectors have been authorised to seize samples. 110 samples of foodstuffs were seized during the year.

General.—An ideal village was started in 1930 on a high and dry land by the circle sanitary inspector of Shibganj to serve as a model to the people. The people migrating to this newly started village from the most unhealthy places have been found to be keeping remarkably free from disease.

19.—Malda.

Vital statistics.—The fall in the birth-rate from 32·7 in 1929 to 27·5 in 1930 was due to bad malaria which prevailed during the last 3 years and which lowered the vitality as well as the fertility of the people. The rise in the death-rate, again from 28·6 to 32·2 is mainly due to larger number of deaths from malaria. 449 omissions of births and 570 of deaths were detected out of 2,269 births and 2,736 deaths examined. 88 chaukidars were fined. 3 out of the 4 persons prosecuted in the municipalities were convicted.

Infantile mortality.—The mortality among infants under one year of age rose from 5,195 in 1929 to 5,423 in 1930; this was due to chronic malaria among parents, the dearth of milk supply for infants and finally to want of trained dais.

Anti-malaria operations.—Due to failure of rains in October there was no flood worth the name. There was a very bad outbreak of malaria, surpassing any recorded previously within the last 5 years. On a rough calculation, over two-thirds of the whole population suffered from this disease. 17 registered anti-malaria societies worked in 1930 against 15 in 1929 on jungle-cutting and kerosinising tanks, filling and draining out thedobas and regular quinine distribution. 285 lbs. of quinine were consumed. The district board also helped union boards in their fight against malaria.

Smallpox.—The intensive vaccination campaign started in 1928 came to a close this year, with the result that the number of deaths from smallpox fell from 3,165 in 1928 to 35 in 1930—the lowest during the last 20 years.

Cholera.—The epidemic of the previous year dragged on till the onset of the monsoon and caused 1,258 deaths against 1,800 in 1929. Every health circle was supplied with 1 cwt. of bleaching powder and a systematic disinfection of all sources of drinking water was undertaken, resulting in the freedom of the district from the usual November outbreak of cholera. 15,764 wells, 855 tanks, 22dobas and 829 other sources of infection were disinfected.

Kala-azar.—Only 2 centres worked besides the dispensaries. In all 2,077 cases were treated.

Food adulteration.—57 samples were sent for analysis of which 11 were found adulterated.

20.—Pabna.

Vital statistics.—The low birth-rate 22.8 for the rural areas is mainly due to defective registration. The death-rates of Atgharia and Sujanagar thanas were very high, while those of Sirajganj and Chouhali were specially low, due to difference in the degree of prevalence of malaria in the two subdivisions of the district. 94 omissions of births and 109 of deaths were detected out of 1,817 births and 2,112 deaths examined. 17 chaukidars were fined. All the nine persons prosecuted under the Bengal Births and Deaths Registration Act were convicted and fined.

Infantile mortality.—It was 226 per mille of births and was higher than that of the previous year. Its main cause was the incidence of malaria and kala-azar.

Anti-malaria operations.—Minor operations, e.g., jungle-cutting, clearing of weeds from tanks and ditches, kerosinisation, filling up of ditches and quinine distribution were undertaken by the anti-malaria societies and some of the union boards.

Kala-azar.—1,091 patients were treated during the year in the hospitals and dispensaries.

Smallpox.—It affected only the thanas of Sara, Kazipur and Belkuchi during March and April and Sujanagar thana in June and July and was quickly brought under control.

Cholera.—The April and May epidemic caused about 94 attacks and 55 deaths in Pabna, Sujanagar and Sara thanas in Sadar subdivision, while the November and December outbreak was responsible for 214 attacks and 117 deaths in Serajganj, Kazipur, Chouhali and Shahzadpur thanas of the Serajganj subdivision. 5,411 wells and 54 tanks were disinfected.

Food adulteration.—The rural sanitary inspectors were authorised to seize samples.

21.—Dacca.

Vital statistics.—The birth-rate was 26.92 and the death-rate 21.34 compared with 27.71 and 22.07 respectively in the previous year. 160 omissions of births and 92 of deaths were detected out of 6,678 births and 4,031 deaths checked. Chaukidars were prosecuted and convicted under section 176 of the Indian Penal Code. 27 prosecutions were instituted against defaulters under the Bengal Births and Deaths Registration Act, and conviction obtained in 26 cases.

Infantile mortality.—It was 181.8 against 182.3 in the previous year.

Anti-malaria operations.—The outbreak of malaria in the Manikganj subdivision was rather severe. Malaria patients were treated at the 5 anti-malaria societies and 15 kala-azar centres, besides the 25 district board charitable dispensaries.

Smallpox.—Smallpox claimed 2,285 victims in 1930. It was comparatively very severe in Rupganj, Narayanganj and Keraniganj thanas where 671, 346 and 324 persons died of the disease.

Cholera.—6,524 deaths occurred from this cause, the highest numbers being returned from Munshiganj (1,077) and Harinampur (1,033) thanas. The outbreak in the latter thana occurred in April and affected almost all the villages; it lasted for about a month. 10,129 wells and 1,485 tanks were disinfected.

Food adulteration.—The sanitary inspectors have been authorised to seize samples.

22.—Mymensingh.

Vital statistics.—140 omissions of births and 70 of deaths were detected out of 17,373 births and 13,180 deaths examined. 3 persons were prosecuted and convicted under the Bengal Births and Deaths Registration Act.

Infantile mortality.—This was considerably decreased during the year.

Sanitary works.—Some tube wells were sunk in the various parts of the district.

Anti-malaria operations.—Free distribution of quinine was made by the rural public health staff and patients were treated by kala-azar doctors.

Kala-azar.—It appears that kala-azar has been brought under control by opening kala-azar centres.

Smallpox.—617 deaths were registered in 1930 against 2,224 in 1929.

Cholera.—The number of deaths recorded from this cause was 4,720. The disease broke out first in Jamalpur and Kishorganj subdivisions and gradually spread over the whole district. In no thana did it last for more than 2 months. 6,052 wells and 1,190 tanks were disinfected.

Food adulteration.—Rural public health sanitary inspectors were authorised to seize samples.

23.—Faridpur.

Vital statistics.—The birth-rate was 26.9 against 28.22 and the death-rate 25.02 against 26.49 in the previous year. 461 omissions of births and 174 of deaths were detected out of 2,033 births and 1,345 deaths examined. 21 prosecutions were instituted and convictions obtained in each case.

Dais.—5 classes were organised during the year and 85 dais trained.

Infantile mortality.—11,324 infants under one year died against 12,123 in the previous year.

Anti-malaria operations.—Attempts were made to organise anti-malaria societies to take up work in approved lines, but they could not make any progress for want of funds. Malaria and kala-azar appear to be on the increase.

Smallpox.—The disease appeared in epidemic form in police-stations Madaripur, Palong and Shibchar. No timely information was given to the thana sanitary officers. No proper steps could be taken on account of the refusal of contacts to get themselves vaccinated. Besides, the females in many cases refuse to take vaccination from the males.

Cholera.—It occurred in an epidemic form in police-stations Palong, Madaripur, Pangsa, Bhanga, Shibchar, Kotwali and Nagarkanda. The people take inoculation when the epidemic is on, but never before that. Besides, homeopathic doctors, village quacks and fakirs use their evil influence and prevent people from taking inoculation. 333 attacks with 134 deaths occurred amongst the inoculated persons. 2,771 wells and 1,662 tanks, 3,620 houses, 735 river ghats ordobas and 742 latrines were disinfected.

Food adulteration.—All the sanitary inspectors and the assistant health officers, the District Inspector and the Sub-Inspectors of Vaccination were appointed food inspectors. 227 out of the 637 samples seized were found adulterated on analysis.

24.—Bakarganj.

Vital statistics.—The birth-rate was 26.43 per mille and the death-rate 17.42 against 32.21 and 20.4 respectively in the previous year. 188 omissions of births and 124 of deaths were detected out of 16,719 births and 12,366 deaths examined. 16 chaukidars were fined. 16 out

of 21 persons against whom action was taken under the Bengal Births and Deaths Registration Act were convicted.

Sanitary works.—5 new tanks were excavated during the year and the work on 3 others was in progress. The 58 existing district board tanks were cleared of silt.

Anti-malaria operations.—Malaria was prevalent in every thana. 13,639 malaria patients were treated by sanitary officers, epidemic and dispensary doctors. 75 lbs. of cinchona and 67 lbs. of quinine were distributed to malaria patients. Raipasa khal was re-excavated to help draining the water-logged areas in the Kotwali thana.

Smallpox.—147 deaths were reported under this head, though the weekly epidemic returns showed only 68 deaths. The disease prevailed in epidemic form to some extent, particularly in Gournadi and Kotwali thanas.

Kala-azar.—This disease is gradually subsiding. 1,347 new and 398 old cases were treated in out centres of which 848 were discharged cured and 11 died. 2,056 new and 112 old cases were treated at the dispensaries, out of which 1,152 were cured and 19 died.

Cholera.—Cholera claimed 2,713 victims. The maximum number of deaths occurred in January. Gournadi, Jhalakati, Matbaria, Bhola and Baranadi circles were badly affected. Pollution of water of tanks and khals by washing the soiled clothes of cholera patients and contact infection played a great part in spreading the disease. 1,839 patients were treated by the public health staff, dispensary and epidemic doctors. 3,267 tanks and 3, 219 houses were disinfected.

Food adulteration.—The sanitary inspectors of rural health circles were empowered to seize samples. No prosecution was instituted during the year under report.

Beri-beri.—10 cases of beri-beri of which 2 died were reported from the Barisal Municipality and 1 from Pirojpur. 58 cases were treated by epidemic and dispensary doctors in rural areas.

25.—Chittagong.

Vital statistics.—The birth-rate in 1930 was 29.74 against 29.95 in 1929, while the death-rate was 20.26 against 21.86. Omissions of 40 births and 10 deaths were detected out of 2,050 births and 1,357 deaths examined. 5 chaukidars were fined and a large number of them were warned. 5 out of 14 defaulters were convicted under the Bengal Births and Deaths Registration Act.

Infantile mortality.—The infant mortality rate was 134.43 against 128.44 in 1929.

Dais.—40 dais were trained during the year.

Anti-malaria operations.—18 union boards did anti-malaria works in the rural areas. 85 lbs. of quinine were distributed to the poor malaria patients through the Presidents of Union Boards, Secretaries of Anti-malaria Societies, Sanitary Inspectors and Kala-azar doctors.

Smallpox.—Only sporadic cases occurred in the district, except a mild epidemic in Mirsarai and Rouzan thanas.

Cholera.—Sporadic cholera cases were reported throughout the year. In the month of March a mild epidemic broke out in Mirsarai police-station, imported from the neighbouring thana of the Noakhali district. Due to prompt measures taken the epidemic did not spread to any other thana of the district. It subsided by the end of June. 31 wells and 676 tanks were disinfected.

Food adulteration.—15 sanitary inspectors were authorised to collect samples and 21 samples seized and sent for analysis to Dacca Laboratory. The vendors of adulterated foodstuff were prosecuted.

26.—Noakhali.

Vital statistics.—The birth-rate was 34.55 against 35.51 in 1929 and the death-rate 20.36 against 21.2. The death-rates in Bamni, Feni and Chhaglnaya thanas were rather high due to the high fever incidence there. The sanitary inspector in charge of Feni Circle did not examine a single case. Only 3 out of the remaining 14 sanitary inspectors detected 36 omissions of births and 22 of deaths, the total number of births and deaths examined by all of them being 2,703 and 1,726 respectively. 2 prosecutions were instituted under the Bengal Births and Deaths Registration Act and there was conviction in one case only.

Infantile mortality.—The death-rate of infants under one year of age was 141.27 against 123.97 in 1929.

Anti-malaria operations.—Jungle-cutting, kerosenisation, filling up ofdobas and ditches and removing of jungle from the edges of the tanks were undertaken by 78 union boards in the district. The sanitary inspectors, the staff of the anti-malaria societies and union boards distributed quinine pills among malaria patients.

Kala-azar.—511 deaths occurred from kala-azar in 1930 against 102 in 1929. The incidence of this disease thus appears to have increased during the year.

Smallpox.—137 deaths were reported against 124 in the previous year. The highest mortality 55 was registered in Feni thana.

Cholera.—Cholera claimed 1,270 victims against 2,358 in 1929, the largest number of deaths 298 being reported from Feni and the smallest 50 from Sandip. 1 well and 932 tanks were disinfected.

The District Health Officer reports that in his district cholera first appears in Ramganj during the jute season, the first few cases being imported from Chandpur which is the principal divisional jute centre. It thus spreads to Raipur and Lakhipur and Begamganj, which are the principal jute growing centres in the district. Owing to the large concourse of jute merchants at these cholera endemic areas, stray outbreaks continue during the whole of the rainy season in the above four thanas, whence the disease spreads to other thanas during winter, its intensity in the latter season depending on the intensity of the outbreaks during the rains in the above jute growing thanas. During the year under report, owing to abnormal depression in the jute trade, the incidence of cholera remained remarkably low in the jute growing thanas during the rainy season and hence there were very few carriers to spread the disease during winter in the remaining thanas of the district.

Food adulteration.—All the sanitary inspectors were authorised to collect samples.

27.—Tippera.

Vital statistics.—The birth-rate was 23·0 and the death-rate 15·3 against 24·63 and 16·17 respectively in the previous year. Omissions of 191 births and 51 deaths were detected out of 2,663 births and 1,653 deaths examined. All the 11 persons prosecuted under the Bengal Births and Deaths Registration Act were convicted.

Infantile mortality.—The infant mortality rate decreased from 116·6 in 1929 to 109·2 in 1930.

Anti-malaria operations.—18,028 cases were treated at the dispensaries, 1,034 by the epidemic staff; 829 by kala-azar doctors and 9,978 by the sanitary staff. Grants were awarded to 7 union boards for anti-malaria works.

Smallpox.—Deaths from smallpox decreased to 589 against 1,856 in the previous year. The disease prevailed throughout the year. Thana Daudkandi was the worst affected and then came Banchharampur.

Cholera.—There were 3,986 deaths from cholera against 5,113 in the previous year. Thanas Chandpur, Faridganj, Matlab, Brahmanbaria and Daudkandi were the ones most affected. 116 wells anddobas and 1,223 tanks were disinfected.

Kala-azar.—Kala-azar claimed 1,601 deaths against 1,016 in 1929, the largest number of deaths being reported from thana Kotwali.

Food adulteration.—11 out of the 20 sanitary inspectors of the health circles were authorised to seize samples.

SECTION VII.

Vaccination (1930-31).

83. Dr. M. E. Sufi was in charge of the Vaccination and Vital Statistics Bureau throughout the year 1930-31.

84. **Strength of staff.**—The subjoined statement shows the strength of the vaccination staff. Compared with the previous year, the rural inspectors were reduced according to the present policy of the department and their work was taken over by the rural sanitary inspectors. In the mafassal municipalities and Calcutta, their number remained the same as in the previous year. The vaccinators were reduced in the rural areas for want of the inducement offered to vaccination by the presence of smallpox which was much less during the year under review. In Calcutta, their number was the same and in mafassal municipalities a little more than the previous year.

Strength of staff, 1930-31.

	1929-30.		1930-31.	
Rural areas—				
Inspectors	95 79
Vaccinators	1,967 1,825
Mafassal municipalities—				
Inspectors	3 3
Vaccinators	161 174
Calcutta—				
Inspectors	18 18
Vaccinators	60 60

85. General Vaccination Statistics (Vaccination Statement No. 1).

—The table below shows the details of vaccination. Except the average number of persons vaccinated by each vaccinator and the number of children between one and six years of age successfully vaccinated, all the other items show a decrease owing to there being very little smallpox during the year.

		1929-30.	1930-31.	Increase + or decrease—.
Total number of persons vaccinated	..	5,529,138	5,280,889	—248,249
Total number of vaccinations performed		5,533,880	5,281,445	—252,435
(a) Primary vaccinations	..	2,304,461	2,246,798	—57,663
Successful	..	2,149,944	2,077,031	—72,913
(b) Re-vaccinations	..	3,229,419	3,034,649	—194,772
Successful	..	1,722,399	1,532,644	—189,755
Average number of persons vaccinated by each vaccinator	..	2,472	2,503	+31
Percentage of successful cases in which results were known—				
(a) Primary vaccinations	..	93·3	92·4	—
(b) Re-vaccinations	..	53·3	50·5	—
Ratio of successful vaccination per mille of population	..	82·9	77·3	—
Number of children successfully vaccinated—				
(a) Under one year	..	305,586	270,401	—35,185
(b) One year and under six years	..	1,415,263	1,426,795	+11,532
Total number of vaccinations performed during recess	..	1,041,723	920,873	—120,850
(a) Primary vaccinations	..	293,486	289,374	—4,112
(b) Re-vaccinations	..	748,237	631,499	—116,738

86. Vaccination in the rural areas (Vaccination Statement No. 1).

—(a) The total number of vaccinations in the rural areas 4,631,888 during 1930-31 was less by 365,555 or 7·3 per cent., compared with the previous year and the smallpox deaths were also comparatively less. It is regrettable to note that in at least three districts—Midnapur, 24-Parganas and Khulna, the number of vaccinations was reduced even though the smallpox deaths increased, during the year under review. Khulna received a special grant of Rs. 4,000 from the Government for carrying on free vaccination yet vaccinations fell by 44·1 per cent. On the other hand the number of vaccinations was higher than the

previous year in the Asansol Mining Settlement, Nadia, Dinajpur, Jalpaiguri, Rangpur and Pabna, although smallpox was reduced in these districts.

Vaccination in rural areas.

Districts.	Vaccinations.		Differences.	Percentage of increase + or decrease —	Small-pox deaths.		Increase + or decrease —
	1929-30.	1930-31.			1929-30.	1930-31.	
Burdwan ..	79,961	89,899	+ 9,938	+ 12·4	255	454	+
Asansol Mining Settlement ..	26,171	56,678	+ 30,507	+ 116·6	32	15	—
Birbhum ..	49,246	90,695	+ 41,449	+ 84·1	85	188	+
Bankura ..	68,379	72,036	+ 3,657	+ 5·3	67	449	+
Midnapur ..	313,171	312,738	- 433	- 0·1	137	336	+
Hooghly ..	38,860	47,595	+ 8,735	+ 22·5	286	696	+
Howrah ..	51,184	53,738	+ 2,554	+ 5·0	299	1,034	+
24-Parganas ..	223,640	210,946	- 12,694	- 5·7	525	529	+
Nadia ..	77,993	96,633	+ 18,640	+ 23·9	231	137	—
Murshidabad ..	239,011	131,222	- 107,789	- 45·1	507	216	—
Jessore ..	165,088	328,980	+ 163,892	+ 99·3	38	172	+
Khulna ..	448,345	250,817	- 197,528	- 44·1	32	42	+
Rajshahi ..	105,933	78,701	- 27,232	- 25·7	344	11	—
Dinajpur ..	125,633	147,232	+ 21,599	+ 17·2	569	225	—
Jalpaiguri ..	57,850	71,701	+ 13,851	+ 23·9	40	24	—
Darjeeling ..	31,194	17,413	- 13,781	- 44·2	59	12	—
Rangpur ..	179,799	304,855	+ 125,056	+ 69·5	723	633	—
Bogra ..	78,067	93,478	+ 15,411	+ 19·7	35	51	+
Pabna ..	94,898	112,988	+ 18,090	+ 19·1	133	78	—
Malda ..	256,405	42,390	- 214,015	- 83·5	95	52	—
Dacca ..	246,003	197,797	- 48,206	- 19·6	3,651	1,899	—
Mymensingh ..	718,179	674,161	- 44,018	- 6·1	1,603	587	—
Faridpur ..	191,827	163,576	- 28,251	- 14·7	2,149	739	—
Bakarganj ..	260,688	211,168	- 49,520	- 19·0	202	122	—
Chittagong ..	138,917	127,296	- 11,621	- 8·4	709	345	—
Noakhali ..	221,033	228,671	+ 7,638	+ 3·4	105	151	+
Tippera ..	491,458	404,484	- 86,974	- 17·7	1,186	556	—
Chittagong Hill Tracts ..	18,510	14,000	- 4,510	- 24·4	28	3	—
Total ..	4,997,443	4,631,888	- 365,555	- 7·3	14,125	9,756	—

(b) The reduction in the total number of vaccination referred to above was shared by both primary vaccinations and revaccinations, 3·6 per cent. in the case of the former and 10·2 per cent. in that of the latter. Both the primary vaccinations and revaccinations were increased in the Asansol Mining Settlement, Birbhum, Hooghly, Nadia, Jessore, Dinajpur, Jalpaiguri, Rangpur and Pabna, and decreased in Khulna,

Malda, Dacca, Mymensingh, Faridpur, Bakarganj, Tippera and Chittagong Hill Tracts. In Burdwan, Bankura, Midnapur, Howrah and Bogra, while the number of revaccinations showed an excess that of primary vaccinations was reduced; in 24-Parganas, Murshidabad, Rajshahi, Darjeeling, Chittagong and Noakhali, however, the reverse was the case.

Primary vaccinations and re-vaccinations performed district by district.

Districts.	Primary vaccinations.		Differ- ences.	Percen- tage of increase + or decrease —	Re-vaccinations.		Differences	Percen- tages of in- crease + or decrease —
	1929-30.	1930-31.			1929-30.	1930-31.		
Burdwan ..	49,675	47,914	-1,761	-3·6	30,286	41,985	+11,699	+38·6
Asansol Mining Settlement ..	12,720	14,840	+2,120	+16·6	13,451	41,838	+28,387	+211·0
Birbhum ..	28,103	40,777	+12,674	+45·1	21,143	49,918	+28,775	+136·1
Bankura ..	44,736	39,785	-4,951	-11·1	23,643	32,251	+8,608	+36·4
Midnapur ..	142,936	113,173	-29,763	-20·8	170,235	199,565	+29,330	+17·2
Hooghly ..	23,868	27,470	+3,602	+15·1	14,992	20,125	+5,133	+34·2
Howrah ..	27,478	26,389	-1,089	-4·0	23,706	27,349	+3,643	+15·3
24-Parganas ..	109,089	115,311	+6,222	+5·7	114,551	95,635	-18,916	-16·5
Nadia ..	51,722	55,226	+3,504	+6·8	26,271	41,407	+15,136	+57·6
Murshidabad ..	56,558	57,268	+710	+1·2	182,453	73,954	-108,499	-59·5
Jessore ..	54,900	91,833	+36,933	+67·3	110,188	237,147	+126,959	+115·2
Khulna ..	63,489	46,135	-17,354	-27·3	384,856	204,682	-180,174	-46·8
Rajshahi ..	33,192	40,531	+7,349	+22·1	72,741	38,160	-34,581	-47·5
Dinajpur ..	82,104	91,929	+9,825	+11·9	43,529	55,303	+11,774	+27·0
Jalpaiguri ..	14,022	26,292	+12,270	+87·5	43,828	45,409	+1,581	+3·6
Darjeeling ..	8,369	8,475	+106	+1·3	22,825	8,938	-13,887	-60·8
Rangpur ..	94,914	101,420	+6,506	+6·8	84,885	203,435	+118,550	+139·6
Bogra ..	49,000	46,442	-2,558	-5·2	29,067	47,036	+17,969	+61·8
Pabna ..	55,702	64,678	+8,976	+16·1	39,196	48,310	+9,114	+23·2
Malda ..	30,968	29,626	-1,342	-4·3	225,437	12,764	-212,673	-43·4
Dacca ..	143,575	107,635	-35,940	-25·0	102,428	90,162	-12,266	-12·0
Mymensingh ..	346,450	338,017	-8,433	-2·4	361,729	336,144	-25,585	-7·1
Faridpur ..	82,275	69,094	-13,181	-16·0	109,552	94,482	-15,070	-13·8
Bakarganj ..	190,572	160,136	-30,436	-16·0	70,116	51,032	-19,084	-27·2
Chittagong ..	66,685	67,930	+1,245	+1·9	72,232	59,366	-12,866	-17·8
Noakhali ..	90,021	103,362	+13,341	+14·8	131,012	125,309	-5,703	-4·4
Tippera ..	211,397	164,083	-47,314	-22·4	280,061	240,401	-39,660	-14·2
Chittagong Hill Tracts ..	8,716	8,341	-375	-4·3	9,794	5,659	-4,135	-42·2
Total ..	2,183,236	2,104,122	-79,114	-3·6	2,814,207	2,527,766	-286,441	-10·2

87. Vaccination in municipalities (Vaccination Statement No. 1).—The total number of vaccinations 523,638 in all the municipalities

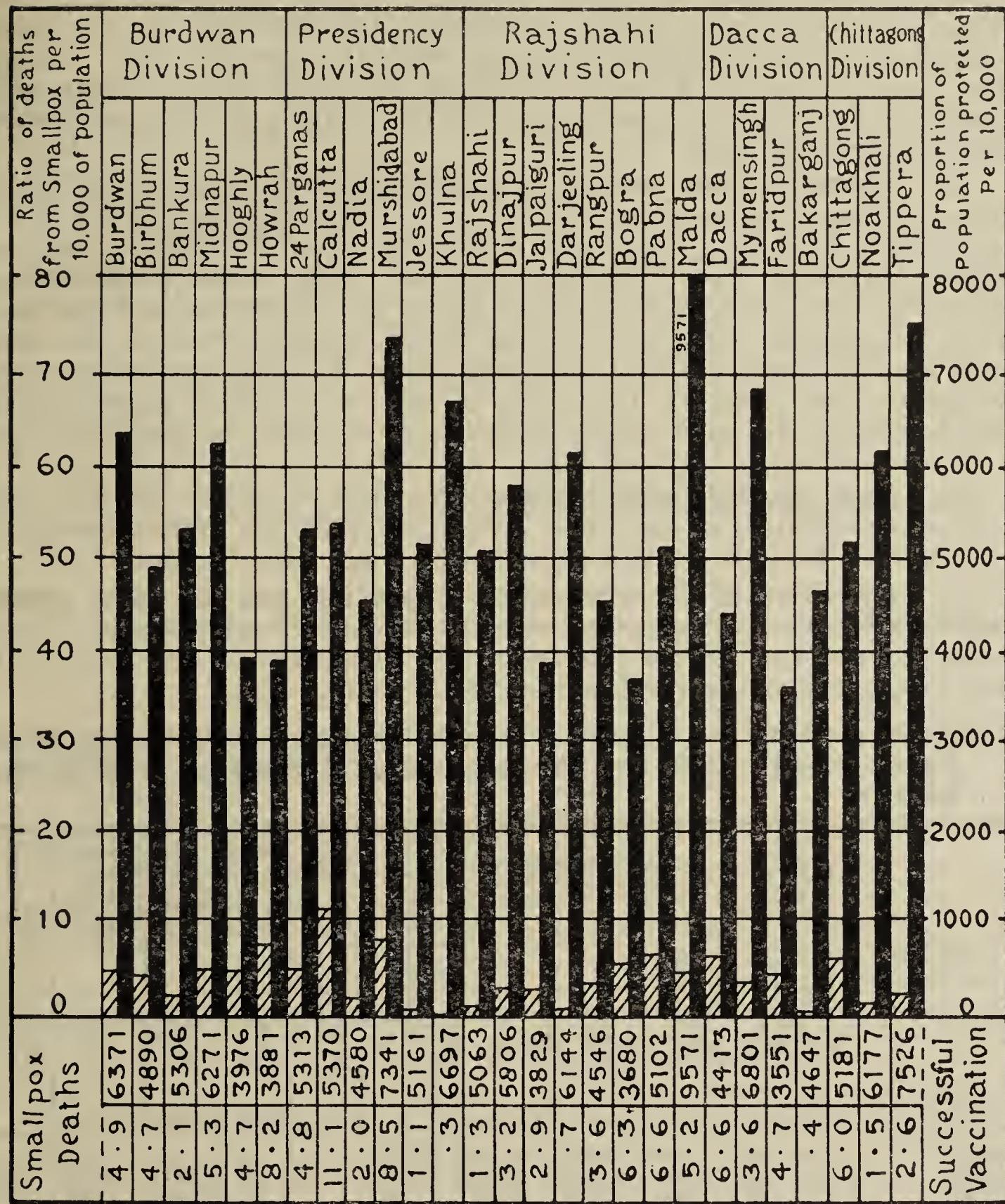
in 1930-31, showed an increase of 112,594 operations or 27·4 per cent. over 411,044 performed in the previous year. Primary vaccinations rose by 15,747 and revaccinations by 96,847. In 45 municipalities, the number of both the primary and revaccinations increased, in 30 others it was reduced, while in the remaining 43, either the one or the other showed an increase over the previous year. Pointed attention is drawn towards Malda, Gobardanga, Nalchiti and Kharar municipalities which could perform only 12, 10, 6 and 5 revaccinations respectively during the whole year, in a population which according to the previous census stood at 3,145, 1,858, 6,056 and 6,580.

88. Vaccinations performed by other agencies (Vaccination Statement No. 1).—The total number of vaccinations performed by other agencies increased by 526, while primary vaccinations were 5,704 more than the previous year, revaccinations were less by 5,178. Jails showed an increase both in primary and revaccinations.

Agencies.	Primary vaccinations.		Increase + decrease —	Re-vaccinations.		Increase + decrease —
	1929-30.	1930-31.		1929-30.	1930-31.	
Tea-gardens ..	11,626	10,639	—	19,069	7,097	—
Factories ..	5,651	3,602	—	34,505	39,278	+
Railways ..	4,240	4,841	+	17,165	12,858	—
Steamers ..	..	..	..	1,200	1,480	+
Dispensaries ..	..	..	..	..	..	..
Jails ..	219	8,358	+	31,718	37,766	+
Total ..	21,736	27,440	+	103,657	98,479	—

89. Degree of protection afforded against smallpox during the 10 years 1930-31 (Vaccination Statement No. V and the diagram on the next page).—Calcutta had the highest number of deaths 11·1 per 10,000 and Khulna the lowest ·3 with Bakarganj ·4 and Darjeeling ·7. The largest number of persons successfully vaccinated per 10,000 of population was registered in Malda (9,571); Tippera stood a good second with 7,526 followed by 7,341 in Murshidabad. On the other hand Faridpur returned only 3,551 the lowest proportion.

DIAGRAM ILLUSTRATING DEATH RATES FROM SMALLPOX AND DEGREE
OF PROTECTION AFFORDED DURING 1921-22 TO 1930-31.



Indicate the death rates from Smallpox.

Indicate the proportion of population protected by Vaccination.

90. Protection afforded to infants (Vaccination Statement No. VI).

—253·1 per mille of the available infant population were successfully vaccinated in 1930-31 compared with 280·4 in the previous year. In the municipalities this proportion was 741·2 against 692·4 and in the rural areas 227·4 against 259·7. Of the 118 municipalities, 9—Kharar and Khirpai (Midnapur), Halishahar and Kanchrapara (24-Parganas), Gaibandha (Rangpur), Malda (Malda), Gauripur (Mymensingh), Nalchiti and Bhola (Bakarganj) did not vaccinate a single infant although the surviving population available for vaccination in these towns was 75, 68, 141, 233, 129, 18, 39, 25 and 111, respectively; of these 9 again—the first, third, fourth, fifth and the last returned a blank record in the previous year. This wilful neglect on the part of

these local authorities is unpardonable. It presages the worst type of a smallpox epidemic in the near future in these places which might in course of time affect the whole province, unless immediate steps are taken to protect every person available. Of the rest, all the other towns but 52 have improved compared with the previous year. In the rural areas, all except 9, show reductions, the worst being Khulna with a falling off of 498·7 per mille of available infant population compared with the previous year.

91. Linear incision method of vaccination.—This method of vaccination has proved quite a success, in spite of the resistance of a few old vaccinators who have been still unable to give up their prejudices against anything new. During the year under review, the rotary method of vaccinating with a rotary lancet has been tried and has been found far superior even to the linear incision method. After numerous trials by the Vaccine Depot Assistants and the Government Sanitary Inspectors, the Sanitary Inspectors of the rural health organisations have been supplied with rotary lancets of local make, before their issue to the vaccinators for general use.

92. Post vaccinal complications.—No report either of the post vaccinal encephalitis or any other serious complication after vaccination was received from any district during the year under review.

93. Activities of the vaccination inspecting and the rural public health staff.—The statement below shows the details of vaccination performed by the Vaccination Inspectors and Sub-Inspectors and the Sanitary Inspectors of the rural public health staff:—

Statement showing the number of vaccinations performed by the Rural Public Health staff and the vaccination Inspecting staff during 1930-31.

Districts. 1	Number of Assistant Health Officers and Sanitary Inspectors. 2	Number of operations performed by the Rural Public Health staff.			Average number of vaccinations performed by each. 6	Number of vaccination Inspectors and Sub-Inspectors. 7	Number of operations performed by the Vaccination Inspect- ing staff.			Average number of vaccinations performed by each. 11
		Primary vaccinations. 3	Revaccina- tions. 4	Total. 5			Primary vaccinations. 8	Revaccina- tions. 9	Total. 10	
Burdwan	16	7,790	8,264	16,054	1,003	2	103	134	237	118
Birbhum	14	6,688	11,427	18,115	1,294	2	248	811	1,059	529
Bankura	19	2,555	7,599	10,154	534	1	217	1,660	1,877	1,877
Midnapur	33	4,232	9,415	13,647	413	4	1,375	3,921	5,296	1,324
Hooghly	15	2,133	3,570	5,703	380	2	476	863	1,339	669
Howrah	10	732	2,883	3,615	361	1	354	70	424	424
24-Parganas	37	5,420	5,645	11,065	299	5	873	882	1,755	351
Nadia	25	2,431	10,818	13,249	530	5	1,083	3,905	4,988	998
Murshidabad	21	2,407	4,665	7,072	336	6	1,194	1,837	3,031	505
Jessore	24	2,704	6,769	9,473	394	2	66	411	477	238
Khulna	22	1,544	7,127	8,671	394	3	262	1,010	1,272	424
Rajshahi	25	2,678	4,360	7,038	281	3	117	274	391	130
Dinajpur	30	4,365	6,334	10,699	356	3	394	462	856	285
Jalpaiguri	17	2,157	3,096	5,253	309	1	222	414	636	636
Rangpur	30	4,285	8,926	13,211	440	3	112	283	395	131
Bogra	12	3,126	4,312	7,438	619	2	116	341	457	228
Pabna	17	3,736	4,492	8,228	484	2	37	88	175	87
Malda	18	1,614	537	2,151	119	2	235	107	342	171
Dacca	32	8,023	13,479	21,502	672	4	527	1,019	1,546	386
Mymensingh	51	9,561	11,847	21,408	419	5	2,030	2,960	4,990	998
Faridpur	16	1,569	3,071	4,640	290	4	760	1,735	2,495	624
Bakarganj	33	6,809	5,618	12,427	376	3	327	228	555	185
Chittagong	16	3,293	4,263	7,556	472	3	736	438	1,174	391
Noakhali	14	3,539	12,693	16,232	1,159	1	1,353	2,085	3,438	3,438
Tippera	20	3,631	6,539	10,170	508	3	1,693	1,732	3,425	1,142

Noakhali gave a good record of the individual members of each staff and all credit is due to them. In Malda the Sanitary Inspectors performed only 119 vaccinations each; on the side of the vaccination staff, each individual member vaccinated only 87 in Pabna, 118 in Burdwan, 130 in Rajshahi, 131 in Rangpur, 171 in Malda and 185 in Bakarganj. This goes to show that full advantage was not taken of these officers by the local Health Officers concerned. In fact with the advent of the rural public health staff, the vaccination inspecting staff has become a superfluity and the sooner it is abolished the better both from the economical and the utilitarian point of view.

94. Inspections (Vaccination Statement No. IV).—Compared with the previous year every inspecting agency inspected a larger percentage of vaccinations performed. The percentage of success too was higher in all cases except in the case of revaccinations as found by rural vaccination and public health staff and in that of the primary vaccination in municipalities. No inspection was made by the Civil Surgeons of Darjeeling and the Chittagong Hill Tracts and the District Health Officer of Bogra. Vaccination statement No. IV gives details of these inspections for every district by the several agencies.

Inspecting Officers.	Percentage of inspections to total number of vaccinations.			
	Primary vaccinations.		Revaccinations.	
	1929-30.	1930-31.	1929-30.	1930-31.
1. District Health Officers and Civil Surgeons of Darjeeling and Chittagong Hill Tracts	1·6	1·9	.7	.8
2. Rural Assistant Health Officers and Sanitary Inspectors and Vaccination Inspecting staff ..	25·4	31·8	11·3	16·4
3. Municipal Superintendents and Assistant Superintendents of Vaccination	1·8	2·4	3·3	4·5

Inspecting Officers.	Percentage of cases found successful to total number inspected.				Percentage of success reported by Vaccinators.	
	Primary vaccinations.		Revaccinations.			
	1929-30.	1930-31.	1929-30.	1930-31.		
1. District Health Officers and Civil Surgeons of Darjeeling and Chittagong Hill Tracts	92·2	96·9	52·5	68·8		
2. Rural Assistant Health Officers and Sanitary Inspectors and Vaccination Inspecting staff ..	93·1	93·8	62·9	60·9		
3. Municipal Superintendents and Assistant Superintendents of Vaccination	98·1	86·1	27·9	34·9		
					1929- 1930- 30. 31.	
					Primary vaccination .. 93·3 92·4	
					Revaccination .. 53·3 90·5	

95. Cost of vaccination (Vaccination Statement No. II).—The total cost of vaccination in 1930-31, Rs. 4,84,166-5-7 was reduced by Rs. 29,840-9-11, compared with Rs. 5,14,006-15-6 in the previous year. This reduction was common to all the heads of expenditure.

Costs of vaccination, 1930-31.

Authorities.	Pay of establishment including vaccination inspecting staff, vaccinators and probationers.	Travelling allowance.		Contingencies.		Total.
		Rs.	a. p.	Rs.	a. p.	
District Boards	2,23,098 3 9	32,808	3 0	10,599	5 9	2,66,505 12 6
Municipalities	1,18,697 10 6	3,507	7 0	5,030	8 0	1,27,235 9 6
Provincial Vaccine Depot ..	14,459 10 0	16	4 0	44,839	4 10	59,315 2 10
Calcutta Corporation Vaccine Depot.	6,100 0 0	....		4,000	0 0	10,100 0 0
Vaccination Bureau ..	20,100 0 0	909	12 9	....		21,009 12 9
Total ..	3,82,455 8 3	37,241	10 9	64,469	2 7	4,84,166 5 7

Rs. 1,10,088-5 were paid from the provincial fund, Rs. 1,56,417-7-6 from district fund and Rs. 1,37,335-9-6 from the municipal fund against Rs. 1,10,033, Rs. 1,90,982-5-9 and Rs. 1,31,107-9-9 respectively in 1929-30. The municipal contribution thus appears to have increased, while the District Board contribution was reduced. Analysing the contributions made by individual district boards it is observed that 15 out of 27 curtailed their expenditure on vaccination during the year under review.

District Boards.	Contribution on vaccination.		
	1929-30.	1930-31.	Difference.
			Rs.
Burdwan	7,415	7,263	152
Birbhum	2,060	1,954	104
Midnapur	14,258	8,971	5,287
24-Parganas	11,844	10,878	964
Nadia	6,322	5,331	991
Rajshahi	7,472	6,485	987
Dinajpur	9,023	3,377	5,646
Darjeeling	4,749	4,006	743
Rangpur	11,788	5,899	5,889
Malda	6,423	2,752	3,671
Mymensingh	29,185	15,784	13,401
Faridpur	4,194	2,260	1,934
Bakarganj	5,299	4,817	482
Noakhali	4,228	3,974	254
Tippera	10,756	7,406	3,350

How far it was discreet for the above mentioned district boards, especially Mymensingh, Rangpur, Dinajpur, Midnapur, Malda, Tippera and Faridpur to have reduced their expenditure on vaccination, particularly when the province is under the shadow of a dreadful pandemic of smallpox forecasted by Dr. Bentley as likely to occur in the near future, time alone will show.

The average cost of each successful vaccination was the same (annas two pie one) as in the previous year and varied from 7 pies in Tippera to annas eleven and pies four in Darjeeling in the rural areas and from 7 pies in Vishnupur (Bankura) to Rs. 2-14-9 in Jhalakati (Bakarganj) in the urban areas.

96. Bengal Vaccine Depot.—Out of 3,780 calves admitted to the depot, pulp was collected from 3,410, the rest being either discharged as unfit before collection or died during the year. The average yield of pulp per cow calf was 211.86 grains against 254.55 and from each buffalo calf 603.77 grains against 672.0 grains in the previous year. The total output of lymph during the year under review was 5,057,180 grains against 4,720,960 and 4,600,152 grains, respectively in the two preceding years. This quantity along with 440,395 grains, the balance of the previous year, made up an aggregate of 5,497,575 grains, out of which 3,842,348 grains were issued, leaving a reserve stock of 1,655,227 grains at the close of the year. 122 stocks of lymph were sampled and analysed bacteriologically against 121 in the previous year. All the stocks were invariably tested before issue for potency both on calves and on human arms. Stock lymph was regenerated through buffalo and cow calves. The total proceeds from the sale of lymph amounted to Rs. 8,177-10 as against Rs. 11,318-11 in the previous year. The total expenditure including overhead charges for supervision, etc., was Rs. 59,315-2-10 against Rs. 59,482-13 in 1929-30.

SECTION VIII.

Sanitary Works (Military).

97. This section is no longer dealt with in provincial public health reports.

SECTION IX.

Sanitary Works (Civil).

98. General remarks.—The financial aspect of public health administration as dealt with in the next three paragraphs is based on the Government Resolution reviewing the reports on the working of municipalities, district boards and union boards in Bengal during the financial year 1929-30, the population being taken as it stood at the time of the last census.

99. (a) Municipal income.—During the year 1929-30 there were 117 municipalities in Bengal excluding Calcutta with an aggregate population of 2,033,993 and an average population of 17,385 for each town. Excluding the opening balance and extraordinary income and debts, the total income was Rs. 97,91,172 against Rs. 92,94,616 in the previous year, the average for each municipality amounting to Rs. 83,685 and that per head of population to Rs. 4-13 against Rs. 80,126 and Rs. 4-9-1 respectively in 1928-29. The total receipts

including the opening balance were Rs. 1,32,41,177 against Rs. 1,29,61,786 in the previous year. The opening balance stood at Rs. 15,07,381 and the extraordinary income and debts at Rs. 19,42,624 against Rs. 15,73,067 and Rs. 20,94,103 respectively in the year preceding. The total income excluding the opening balance thus showed an increase of Rs. 4,96,556 or 5·3 per cent. and the total receipts including the opening balance that of Rs. 2,79,391 or 2·2 per cent. over the previous year. The average incidence of taxation per head of population was Rs. 2-8-10 against Rs. 3-5-11 in the previous year.

(b) **Municipal expenditure.**—The total expenditure (excluding extraordinary and debt) was Rs. 92,92,327 against Rs. 92,03,302 in the previous year, the increase in 1929-30 amounting to Rs. 89,025 or 0·9 per cent. The subjoined table shows the expenditure on the several heads in proportion to the total receipts including the opening balance for the year:—

Heads.	Total expenditure, 1929-30.	Percentage proportion to the total receipts.		Increase or decrease.
		1928-29.	1929-30.	
Rs.				
Sanitary works ..	56,19,198	44·1	42·4	-1·7
Public safety ..	7,27,610	5·1	5·5	+0·4
Roads ..	8,42,294	6·6	6·4	-0·2
All other requirements	21,03,225	15·2	15·9	+0·7

The average expenditure per head of municipal population on the several items of sanitary works is shown below:—

Items of expenditure.	Total ex- penditure 1929-30.	Average expenditure per head of population.				Percentage increase + or decrease -
		1928-29.	1929-30.	Rs.	Rs. a. p.	
Conservancy	25,14,111	1·657=1 10 6·1	1·236=1 3 9·3			-25·4
Water-supply	17,25,018	·592=0 9 5·6	·848=0 13 6·8			+43·2
Drainage	5,58,585	·183=0 2 11·1	·275=0 4 4·8			+50·3
Disposal of the dead (including burial ground and burning ghat charges)	49,602	·023=0 0 4·4	·024=0 0 4·6			+4·3
Markets and slaughter houses ..	79,507	·030=0 0 5·8	·039=0 0 7·5			+30·0
Medical relief (Hospitals and epidemic charges)	3,71,191	·166=0 2 7·8	·182=0 2 10·9			+9·6
Vaccination	35,640	·017=0 0 3·2	·018=0 0 3·5			+5·9
Charges on account of Health Officers and Sanitary Inspectors ..	1,91,253	·099=0 1 7·0	·094=0 1 6·0			-5·1
Registration of births and deaths ..	18,224	·008=0 0 1·5	·009=0 0 1·7			+12·5
Other sanitary requirements ..	76,067	·033=0 0 6·3	·037=0 0 7·1			+12·1
Total ..	56,19,198	2·809=2 12 11·3	2·763=2 12 2·5			-1·6

Compared with the previous year while the expenditure on each individual head had increased in 1929-30, with the exception of conservancy and charges on account of Health Officers and Sanitary Inspectors, which show a falling off, the total expenditure appears to be reduced by 1·6 per cent. The aggregate expenditure incurred by some of the municipalities on certain subsidiary heads during the year under review was as follows:—

		1928-29.	1929-30.
		Rs.	Rs.
1.	Anti-malaria measures ..	..	4,454 4,877
2.	Public health propaganda work including Health Exhibition ..	15,279	4,557
3.	Infectious diseases hospitals ..	24,872	19,008

100. District Boards: Income and Expenditure.—The total income of the 26 district boards in the province with an aggregate population of 43,411,036 was Rs. 1,40,93,914 against Rs. 1,42,90,873 in 1928-29, the average income of each district board being Rs. 5,42,074 and that per head of population annas five and pies two. The total receipts including the opening balance were Rs. 1,83,87,843 against Rs. 1,86,89,034 in the previous year. The opening balance was Rs. 35,01,521 against Rs. 30,96,141 in the preceding year. The total income excluding the opening balance was reduced by Rs. 196,959 or 1·4 per cent. and the total receipts including the opening balance by Rs. 301,191 or 1·1 per cent. The average incidence of taxation per head of population was annas three against annas two and pies eleven in the previous year.

The total expenditure excluding debts amounted to Rs. 1,43,49,155 against Rs. 1,40,51,563 in the previous year, showing an increase of Rs. 2,97,592 or 2·1 per cent. The following statement shows the percentage proportion of expenditure on some of the main heads to the total receipts:—

Heads.	Total Expenditure, 1929-30.	Percentage proportion to the total receipts.		Increase or decrease.
		1928-29.	1929-30.	
Rs.				
Communications ..	33,20,776	18·4	18·1	-0·3
Water-supply ..	7,58,883	4·5	4·1	-0·4
Buildings ..	4,46,383	2·7	2·4	-0·3
Drainage ..	20,620	·09	0·1	+0·01
Sanitation ..	11,95,772	4·9	6·5	+1·6
Vaccination ..	2,94,862	1·5	1·6	+0·1

It is to be noted that while 31·1 per cent. of the total receipts were expended on public works, only 6·5 per cent. or 5·3 pies were spent per head of population on sanitation and 1·6 per cent. or 1·3 pies on vaccination in the year under review against 4·9 per cent. or 4·1 pies and 1·5 per cent. or 1·2 pies respectively in the previous year.

101. Village self-government: Union Boards.—There were 4,308 union boards working during the year 1929-30 against 4,008 in the previous year. The total income from union rates levied under the Village Self-Government Act rose from Rs. 9 lakhs to Rs. 12 lakhs, while the total receipts excluding opening balance increased from Rs. 71,42,000 to Rs. 85,23,000. The total expenditure which was Rs. 69,22,000 in the previous year amounted in the year under review to Rs. 83,63,000, of which Rs. 24,69,000 were spent on communications, public health, medical relief, water-supply and education against Rs. 23 lakhs in the preceding year, leaving a closing balance of Rs. 15,03,000. Approximately Rs. 7 lakhs were devoted to roads, Rs. 7 lakhs to water-supply, Rs. 1½ lakh to drainage and conservancy, Rs. one lakh each to public health and dispensary works and Rs. 3½ lakhs to schools.

102. Sanitary works in urban and rural areas.—The total expenditure on sanitary works by the Government, the municipalities and the district boards during the year 1929-30 amounted to Rs. 25,98,679 against Rs. 24,63,549 during the previous year, showing an increase of Rs. 1,35,130 or 5·5 per cent., as compared with the previous year. The most important items each costing Rs. 5,000 or more are shown below:—

	Rs.
Suri drainage scheme	14,046
Suri water supply scheme	2,24,174
Hooghly-Chinsura waterworks extension scheme ..	2,30,000
Bansberia water-supply scheme	96,700
Naihati water-supply extension scheme	1,37,000
Sinking of a deep tube well in the Jalpaiguri district ..	5,955
Darjeeling water-supply extension scheme (Sinchal Lake)	20,000
Dacca waterworks improvement	3,17,049
Sanitary works in Sagar mela	19,248

103. Sanitary administration in municipal and rural areas.—19 Health Officers and 98 Sanitary Inspectors were employed in the municipalities of the province excluding Calcutta, the sanctioned scale being 21 Health Officers and 100 Sanitary Inspectors. In addition to the sanctioned establishment, the Howrah municipality as in the previous year maintained three Assistant Health Officers to cope with the increased municipal sanitary work. There was no Health Officer employed in the Chittagong municipality and the Rajpur municipality maintained no Sanitary Inspector during the year. The Barisal municipality failed to employ a Health Officer and Santipur and

Baraset maintaining Sanitary Inspectors. Out of the three sanctioned posts of Sanitary Inspectors, the Bhatpara municipality employed only two Sanitary Inspectors, one post remaining vacant throughout the year. The Gaibandha municipality continued maintaining a Sanitary Inspector although not yet required to do so under the Bengal Municipal Act. All the districts with the exception of Darjeeling were provided with fully qualified Health Officers.

104. Bengal rural public health organisation.—(1) In the year 1925 the late Mr. C. R. Das raised in the Bengal Legislative Council the question of public health and the organisation that was essential to work it successfully. Adopting the broad outlines of his scheme, the Government of Bengal initiated in the year 1927 the current rural public health organisation. Under this scheme every thana unit, aggregating nearly 600 in number excluding those located in Darjeeling district and municipal towns, has been constituted into a health circle staffed by a non-medical Sanitary Inspector (only a few by Assistant Medical Officers of Health), a health assistant and a carrier servant, at a maximum aggregate annual cost of Rs. 2,000 for each circle. The entire recurring expenditure of Rs. 12,00,000 is borne by the Government of Bengal from the provincial revenues, subject to the condition that the district boards concerned shall not reduce their own previous average expenditure on public health.

(2) The new organisation is controlled directly by district boards, all of whom employ District Health Officers. The primary aim of the organisation is the prevention of epidemic disease by securing early information about the health conditions of the circles and taking immediate action to prevent an outbreak and to control it if it has already spread. The Sanitary Inspectors and Assistant Health Officers in charge of health circles in addition try by personal influence, by health talks and by simple demonstrations and lectures to bring to the homes of the villagers some knowledge of the elements of hygiene and sanitation.

(3) In order that the health circles may have the support of public opinion, public health committees have been formed locally. These committees are intended on the one hand to operate for the decentralisation of public health work in matters of purely local interest and on the other serve as a co-ordinating agency for the work of the union boards in measures extending over a larger area than that of a single union board. The duties of such committees are to give information to the Sanitary Inspector about health conditions in the area which each member represents, to hear reports of the work which the former has been doing and to learn from him in what matters their co-operation as a committee or as individuals would be salutary.

(4) The inspection of these health circles is undertaken by the circle Assistant Directors of Public Health. Their recommendations for the improvement in the working of these circles are communicated by the Bengal Public Health Department to the District Boards concerned for necessary action.

(5) The scheme which has not yet been introduced in the Darjeeling district was brought into effect gradually and has been completed during the course of the year under review.

The subjoined statement shows the number of health circles established in the several districts of Bengal Presidency.

Statement showing the number of health circles established in the Bengal Presidency.

Districts.						Health Circles.
1. Burdwan	..	..	..	..	..	16
2. Birbhum	..	..	..	..	..	14
3. Bankura	..	..	..	..	..	19
4. Midnapur	..	..	..	..	..	33
5. Hooghly	..	..	..	..	..	15
6. Howrah	..	..	..	..	..	10
7. 24-Parganas	..	..	..	..	..	37
8. Nadia	..	..	..	..	..	25
9. Murshidabad	..	..	..	..	..	20
10. Jessore	..	..	..	..	..	24
11. Khulna	..	..	..	..	..	22
12. Rajshahi	..	..	..	..	..	24
13. Dinajpur	..	..	..	..	..	30
14. Jalpaiguri	..	..	..	..	..	17
15. Rangpur	..	..	..	..	..	30
16. Bogra	..	..	..	..	..	12
17. Pabna	..	..	..	..	..	17
18. Malda	..	..	..	..	..	15
19. Dacca	..	..	..	..	..	32
20. Mymensingh	..	..	..	..	..	51
21. Faridpur	..	..	..	..	..	25
22. Bakarganj	..	..	..	..	..	33
23. Chittagong	..	..	..	..	..	20
24. Noakhali	..	..	..	..	..	14
25. Tippera	..	..	..	..	..	20
				Total	..	575

SECTION X.

105. Personal Proceedings.—Dr. Bentley was the Director of Public Health and I was the Director of the Bengal Public Health Laboratory throughout the year 1930. All the other Assistant Directors of Public Health continued to occupy their several posts, except that Dr. Batra proceeded on a year's leave out of India from the 30th July 1930, when Dr. B. C. Mukharji officiated in the Burdwan Circle and Dr. J. P. Chaudhuri as the Inspector of Septic Tank Installations. There was no other change in the superior personnel of the department. All of them contributed towards maintaining the efficient working of the department.

R. B. KHAMBATA,

Director of Public Health, Bengal (offg.).

CALCUTTA;

The 4th December 1931.

Part II

Annual Report of the Sanitary Board, Bengal. for the year 1930.

106. **Work of the Sanitary Board.**—(1) The number of official and non-official members of the Board remained the same as in the previous year. The term of office of the non-official members appointed in 1929 having expired in July, the following gentlemen were reappointed for a term of another year:—

The Chief Medical Officer, Eastern Bengal Railway.

Dr. K. Ahmed.

Dr. Tarak Nath Sur, M.D.

Dr. Ahmed, M.B. (CAL.), D.O.M.S. (LOND.), F.R.C.S. (EDIN.).

Rai Upendra Nath Brahmachari Bahadur.

Mr. George Bransby Williams, M.INST.C.E.

Hadji Capt. Dabiruddin Ahmed.

Dr. (Mrs.) Mary H. Y. Remfry and Dr. D. N. Maitra were newly appointed as non-official members for a similar term.

Dr. C. A. Bentley and Mr. F. C. Griffin were joint secretaries throughout the year.

Major-General G. Tate, I.M.S., was the Vice-President up to March 14th; Lieutenant-Colonel H. B. Steen, I.M.S., from March 15th to November 4th, and Major-General W. V. Copinger, I.M.S., for the remainder of the year.

The Board held four meetings during the year, all in Calcutta.

(2) The following projects were considered by the Board and recommended for sanction:—

(a) *Sketch Projects.*

Estimated cost.	Rs.
-----------------	-----

(i) Hooghly-Chinsurah waterworks improvement ... 2,47,734

(ii) Serampore waterworks extension ... 2,24,000

Scheme (ii) above was approved by the Board only provisionally. They were of the opinion that before the scheme was proceeded with, the question as to whether the water-supply of the Howrah Municipality could not be further extended so as to fully accommodate Serampore, should be examined.

(b) *Detailed Projects.*

Estimated cost.	Rs.
-----------------	-----

(i) Barisal waterworks improvement ... 88,700

(ii) Suri water-supply extension ... 7,890

(iii) A tube well scheme for improvement of road
watering and fire extinction in Howrah Municipality ... 48,000

(3) The Board considered the following report and notes:—

- (i) Report on the work of the Dacca Maternity and Child Welfare Trust in 1929.
- (ii) Note on the flushing of riverbeds from the Damodar river on the left bank of the Damodar in the Burdwan, Hooghly and Howrah districts during the monsoon of 1930, by Mr. C. Addams-Williams, Chief Engineer, Irrigation Department.
- (iii) Note on treatment of night-soil by Digestion Tanks and Aeration by Mr. F. C. Griffin, Chief Engineer, Public Health Department, Bengal.

With regard to item (ii) the Board expressed the opinion that the experiment referred to in the note was proceeding on satisfactory lines and that any expenditure incurred thereon was well worthwhile.

As regards item (iii) the Board considered that experiments on the lines of Mr. Griffin's note might be usefully made, regard being had to the relative quantity of gas in India and Europe and the comparative economic value of the digestion of activated sludge and disposal of dried sludge.

(4) The Board also considered the following inspection reports during the year and took such action as was considered necessary:—

- (i) Inspection report of the Executive Engineer, Dacca Sanitary Works Division, Public Health Department, Bengal, on the public latrines, dumping depots and gully pits at Dacca.
- (ii) Inspection reports of the Executive Engineer, Western Division, Public Health Department, Bengal, on Midnapore, Burdwan and Suri waterworks.
- (iii) Inspection report of the Executive Engineer, Presidency Division, Public Health Department, Bengal, on Hooghly-Chinsurah waterworks.
- (iv) Inspection reports of the Executive Engineer, Central Division, Public Health Department, Bengal, on Krishnagar, Barisal and Patuakhali waterworks.

107. Inspection Reports of Municipalities.—They were circulated to the members of the Board and were discussed at the meeting.

108. Water Analysis Reports.—The Board examined the analysis reports on water-supplies of the various towns in the province and took such action as was considered necessary.

C. W. GURNER,
President.

R. B. KHAMBATA,
F. C. GRIFFIN,
Joint Secretaries.

CALCUTTA;
The 28th February 1931.

Part III

Eighteenth Annual Report of the Chief Engineer, Public Health Department, Bengal, 1930.

109. **Establishment.**—Mr. W. J. Berry, Rai Saheb K. C. Banerjee and Mr. B. N. Mazumdar, Executive Engineers, held charge of the Dacca, Presidency and Western Divisions respectively, throughout the year.

Mr. S. N. Ghose, Executive Engineer, Central Division, was on leave from the 15th August to 23rd December 1930, and Rai Saheb S. N. Roy officiated for him during the period.

The strength of the Subordinate Engineering Establishment at the end of the year was as follows:—

		Permanent.	Temporary.	Total.
Assistant Engineers	..	3	3	6
Supervisors	..	1	9	10
Overseers	..	..	10	10
Sub-Overseers	..	..	12	12

Government accorded administrative approval to the creation of the following permanent posts:—

Supervisors	..	..	6
Overseers	..	..	4
Sub-Overseers	..	..	8

but effect has not yet been given to this reorganisation.

110. **Schemes prepared.**—The following projects were drawn up during the year:—

<i>(a) Sketch Projects.</i>					Estimated cost. Rs.
(i) Bagerhat Water-supply	..	..	..	..	70,000
(ii) Katwa Water-supply—Two alternative schemes were drawn up :—					
(a) With single zone distribution	..	..	..	..	49,700
(b) With multiple zone distribution	..	..	..	..	62,200
(iii) Tittaghar Khal Improvement—Three estimates were prepared :—					
(a) Providing pucca invert and side walls for the length of khal between the railway and the river	..	..	..	..	48,500
(b) Making the whole length of the khal pucca (revised estimate)	..	..	..	..	85,600
(c) Covering the same as well as making the whole length pucca (second revised)	..	..	..	..	1,38,500
(iv) Naihati Sewerage (revised)	..	..	..	..	5,00,000
(v) Khulna Drainage	..	..	..	..	90,000
(vi) Rangamati Water-supply (bazar area)	..	..	..	..	20,300
(vii) Dinajpur Water-supply (revised); Distribution on decentralised storage system	..	..	..	..	1,75,000
(viii) Siliguri Drainage—Two schemes were prepared :—					
(a) Works to be executed by the Union Board	..	..	..	..	17,200
(b) Works to be executed by the Railway authorities	..	..	..	..	8,500
(ix) Salboni Water-supply and Sewerage (combined scheme)	..	..	..	..	1,45,162
(x) Faridpur Drainage	..	..	..	..	9,500
Total	..	..	..	..	14,18,462

(b) *Detailed Projects.*

	Rs.
(i) Tittaghar Sewerage Extension	2,30,000
(ii) Rajshahi College Improvement—Two schemes were prepared :—	
(a) Works within the college compound	78,100
(b) Works outside the college compound	76,800
(iii) Jalpaiguri Water-supply	1,75,000
(iv) Kotrung Outfall Drainage	3,900
(v) Improvement of Ryland Channel and Bagerkhal	34,900
(vi) Pabna Water-supply (revised)—Two alternative schemes were prepared—	
(a) With an elevated reservoir	1,53,000
(b) With a distribution on "Decentralised Storage" system	1,45,600
(vii) Narayangunge (West Bank) Water-supply Improvement ..	1,73,400
(viii) Brahmanbaria Water-supply	1,36,000
Total ..	12,06,700

111. Works under construction.—(i) *Dacca Waterworks Improvement Scheme.*—The old 16" suction pipe was cleaned, relaid to a proper gradient and taken into use in parallel with the new suction main. This has effected a great improvement in the discharge from the low lift pumps. For many years it has been necessary to run the pumping engines with the high lift pumps by-passed for several hours per day, in order to make up the deficient discharge of the low lift. This time of by-passing is now reduced to half an hour during the driest season of the year. By-passing will be entirely done away with when the old suction valves in the engine room are replaced, as a considerable quantity of air is drawn in through the standing engine.

The remodelling of the settling tanks and the installation of the Paterson mechanical filters were completed during the year. The filters were taken into use at the end of the year.

The first of the two filtered water suction wells was completed and put into commission, with the result that the capacity of the clear water reservoir to which it is attached can now be utilised to the full.

The remaining cross connections between the pumping and distribution mains were dismantled, and by the arrangements thus completed the old system of direct pumping into the mains can be abandoned. The whole town can now be supplied through the old and new reservoirs. This leads to an appreciable reduction in the speed at which the pumping plant has to be worked, which is very much better for the life of the plant.

Owing to the delay in provision of the necessary funds, progress on this work was slowed down considerably.

At the request of the municipal commissioners an estimate was prepared for the repair of the filtered water suction pipe, and on the receipt of funds the work was carried out by the department. Thereby a menace to the purity of the water-supply of the town of many years standing was removed, and incidentally a saving in water was made, since considerable leakage took place during certain hours of the day when the suction pipe was brought under pressure, and as the clear water reservoir filled.

(ii) *Dacca Main Drainage Extension Scheme.*—Owing to non-disposal of the reference to the High Court mentioned in last year's report, there was very little progress with this scheme during the year under review.

A few gully pits and branch sewers were however constructed and brought into use.

(iii) *Outfall works.*—Work on the raising and levelling of the irrigation area at the outfall works was completed and the whole area brought under cultivation during the year.

(iv) *Government buildings sanitation scheme, Dacca.*—The works included in part I of the sanitation scheme for the new hostel for the Ahsanullah School of Engineering were completed together with the installation of the filtered water-supply to this building.

An estimate was prepared for a sewer connection to the surface drains around the Infectious Diseases Wards at the Mitford Hospital, and on receipt of funds a specification and bill of quantities were prepared and tenders obtained. The work was just being commenced at the close of the year.

(v) *Chandpur Water-supply Scheme (Northern Section).*—After considerable delay, possession of the land for the headworks was obtained in the month of July. Contracts were let for the supply of the pumping and filtration plant, the elevated steel reservoir and the suction and distribution mains.

Contract drawings, specifications and bills of quantities were prepared for the construction of the Intake jetty, crude water storage tanks, coagulating tank, engine room, filter house, workshop, stores and office.

Tenders for these works were obtained, a contract entered into and construction commenced at the end of December.

(vi) *Narayangunge (East Bank) Water-supply.*—The second tube well was sunk and tested.

Contract drawings, specifications, and bills of quantities for the engine room, filter house, workshop, office and stores, as well as the settling tank, were prepared, tenders obtained and a contract entered into. The masonry well for the low lift pump was sunk and the bottom plugged. Work on the main building was taken in hand in December.

Tenders were also obtained for the five elevated zone reservoirs, but it was not possible to let a contract for these works owing to very considerable delay in the acquisition of three of the sites.

(vii) *Reconditioning of the Dacca University sewers.*—Repairs to the several sections of the sewers were nearly completed during the year.

The work was considerably delayed by the riots which occurred just before the break of the monsoon.

(viii) *Tittagarh Sewerage Extension Scheme.*—This includes the supply and erection of the third unit of the Simplex Activation Plant, together with the masonry structure in connection therewith. The plant was almost ready for running at the end of the year. The surface drains provided in the scheme were also completed and brought into operation during the year.

(ix) *Bhatpara Improvement Scheme.* Water-supply.—This portion of the scheme including the laying of pipes in the proposed new roads was practically completed, with the exception of one or two mill connections. The pipe-lines so far completed were brought into operation during the year.

Sewerage.—Considerable progress was made during the year. About three-fourths of a mile of sewers were completed, two contractors being engaged on this portion of the work.

Considerable headway was also made in the construction of the staff quarters and the engine house, which were nearing completion at the end of the year.

A start was made on the construction of the outfall works for the treatment of the sewage. A considerable portion of the storm water tank was finished, and also the culvert under the railway line for passage of the rising main and cables.

Roads.—Some progress was also made on the construction of the new roads, about half the earthwork being done during the year.

In all, works to the value of Rs. 3,33,000 were paid for up to the end of the year, and liabilities to the extent of Rs. 3,82,300 were incurred.

(x) *Bansberia Water-supply Scheme.*—This scheme consists of laying about 56,800 feet of water mains and construction of 127 street standposts. The pipes arrived at site about the middle of the year, and practically three-fourths of the whole scheme was completed before the end of the year.

(xi) *Patuakhali Waterworks.*—The scheme was completed early in the year and handed over to the municipal authority for maintenance. A small subsidiary scheme for alum and chlorinating plant was sent to the Municipality for approval.

(xii) *Faridpur Waterworks.*—Both the oil engines passed the necessary tests, and the works were handed over to the municipal authority for maintenance.

(xiii) *Kalimpong Bazar Sewerage.*—The scheme was completed and is now working satisfactorily. The maintenance of the scheme was handed over to the Darjeeling Improvement Fund authorities. Arrangements were being made to lay a part of the sewer round the *mela* ground with the extra money handed over to the department during the year.

(xiv) *Rajshahi Water-supply.*—The detailed scheme was revised again at the end of the year. Estimates for two alternative schemes—one with electric drive, and the other with oil engine drive—were prepared.

(xv) *English Bazar Water-supply.*—The tender for the construction of the engine house was accepted and work started. A tender for the supply of the machinery was also accepted.

(xvi) *Satkhira Water-supply Extension (Revised scheme).*—The Municipality took up the execution of the work at the end of the year under the supervision of their Overseer, subject to the control of this department.

(xvii) *Asansol Water-supply.*—The infiltration gallery was constructed up to a length of 150 feet. Construction of the sump well, the pump house and the erection of the machinery were completed by the

end of September. The elevated reservoir and about two-thirds of the distribution system were also completed. Thus practically the whole of the waterworks (excluding a portion of the infiltration gallery and part of the distribution system) was completed. This enabled the main portion of the works to be brought into operation before the end of the year.

(xviii) *Midnapur Jail Water-supply*.—The waterworks was completed and handed over to the Jail authorities.

(xix) *Midnapur Waterworks completion*.—Tenders for the supply of pipes for the remaining portion of the distribution system were called for and a contract was placed.

(xx) *Improvement of drainage of the Sub-Jail at Tangail*.—Specification and bill of quantities were drawn up and tenders called for.

112. Expenditure on new works.—The total capital expenditure on waterworks and sewerage works during the year were Rs. 5,77,537 and Rs. 3,19,005 respectively, *vide* appendices I and II, as against Rs. 8,74,587 and Rs. 2,91,745 respectively in the previous year.

113. Maintenance of Sewerage Works and Waterworks.—(i) *Dacca main drainage*.—The working and management of the sewage pumping station at Narinda and the outfall works and farm were carried out by the department up to the 31st August, on which date these works were handed over in full running order to the Dacca Municipality for management. During the year ending 31st August 1930, the quantity of sewage and storm water pumped and disposed of amounted to 723,869,750, gallons.

The total cost of pumping and maintenance of the pumping plant including supervision fees amounted to Rs. 15,733-3- $\frac{1}{4}$ or .35 annas per thousand gallons, as against .39 annas in the previous year. This was defrayed by the municipal authority.

Farming operations were carried on successfully at the outfall works, and the proceeds from the sale of green fodder and other farm produce amounted to Rs. 14,289; —an increase of Rs. 762 on the previous year's income.

The outbreak of rioting considerably disorganised the retail sales of green fodder, and this coupled with the slump in jute prices adversely affected the sale-proceeds. Nevertheless, the operations of sewage treatment and farming yielded a net profit of Rs. 2,175.

The net cost of pumping and disposal therefore amounted to Rs. 13,558.

The demand from outside cultivators for effluent for irrigation purposes continued to increase. The charge levied for such irrigation was Rs. 7-8 per acre per crop, for two or more waterings, as required by the cultivators.

(ii) *Kalimpong Waterworks*.—The works were maintained by this department as in previous years.

114. General.—(1) The monthly returns of the various sewerage and waterworks were regularly checked and necessary action taken on cases of irregularities.

(2) The reports of Messrs. Worthington Simpson, Limited, on their periodical inspections on the various waterworks machinery and filters were scrutinised and forwarded to the local bodies concerned with necessary remarks.

(3) The reports on analyses of water issued by the Director of Bengal Public Health Laboratory, and the Medical Officer, Darjeeling, were regularly dealt with and necessary action taken to improve the quality of water in the cases of unsatisfactory results.

(4) The Mechanical Assistant Engineer and the Mechanical Overseer of the department carried out inspections of several waterworks.

(5) The total number of municipal waterworks in operation in the province during the year was 41. The total number of persons served was 1,010,377 and the total quantity of filtered water supplied was 13,762,192 gallons per day on an average.

(6) The diagram in Appendix III shows the comparative figures for consumption of coal and fuel oil during the year at the various waterworks and sewage pumping stations in the Presidency.

115. Miscellaneous.—(i) Estimates and plans for the following works were drawn up:—

	Rs.
(a) Midnapur Water-supply—	
(i) Uncompleted portion of the distribution system	34,246
(ii) Repairs to Elevated Reservoir—Two alternative estimates were prepared—	
(1) With 1" thick plastering with Sika No. 1	1,104
(2) With "X" Grade Malthoid damp course 3" thick cement concrete ..	2,838
(b) Bhatpara Improvement Schemes—	
(i) Lowering the bed of Railway culverts ..	1,378
(ii) Chord Road from Shamnagar to Bhatpara commencing from Clerk Ghat Road to Romanath Ghosh Road	3,36,200
(iii) Side slope of kutchha-pucca drain	6,700
(iv) Increasing the thickness of manhole walls ..	4,582
(c) Asansol Water-supply—	
(i) Slab culverts along rising main	3,600
(ii) Extension of pipe line to Mr. Agabeg's bungalow	3,200
(iii) Fencing the compound of Elevated Reservoir ..	960
(d) Rajbari Water-supply—	
(i) Addition and alteration to Elevated Reservoir	4,000
(ii) Iron elimination plant	560
	<hr/>
	3,99,368

	Rs.
(e) Suri Water-supply—	
(i) Protective Dam for Filtration Gallery ..	3,500
(ii) Extension of Distribution System ..	5,260
(f) Faridpur Water-supply—	
(i) Addition and alteration to settling tank ..	600
(ii) Conversion of driver's quarters to Superintendent's quarters	1,400
(iii) Addition and alteration to staff quarters ..	4,157
(g) Krishnagar Water-supply—Construction of foundation for the new engine	125
(h) Bagerhat Sub-Jail Drainage Improvement ..	1,370
(i) Kurseong Water-supply—Chlorinating arrangement for spring on road to the burial ground	1,120
(j) Patuakhali Waterworks—Construction of alum tank ..	1,200
(k) Tittaghar Sewerage Extension—Additional works required for altered arrangements	3,072
(l) Kalimpong Waterworks—	
(i) Maintenance of and repairs to Darjeeling Improvement Fund Water-supply area for 1930-31	1,500
(ii) Maintenance of Kalimpong Water-supply ..	3,500
(m) Gangasagar Mela Water-supply, 1931 ..	3,850
(ii) Estimates for tube wells were prepared for—	
(a) Jalpaiguri Water-supply scheme ..	18,900
(b) Rajshahi Water-supply scheme ..	20,000
(c) Mainamati Survey School Water-supply ..	7,848
Total ..	4,76,770

(iii) The total value of schemes prepared is as follows:—

	Rs.
(i) Sketch projects	14,18,162
(ii) Detailed projects	12,06,700
(iii) Miscellaneous works	4,76,770
Total ..	31,01,632

(iv) An estimate was supplied to the Deputy Commissioner, Chittagong Hill Tracts, for sinking an $1\frac{1}{2}$ " tube well in the compound of the dispensary at Ramgarh.

(v) At the request of the Executive Engineer, Public Works Department, Dacca Division, advice was given on the sinking of a 2" tube well and the fitting of a suitable pump for the Vidyamoyee High English School for Girls at Mymensingh.

(vi) At the instance of the District Board, 24-Parganas, temporary arrangements were made for supply of filtered water to the pilgrims at Sagaur Island on the occasion of the annual *mela*. The measure was as effective as in the previous years in preventing an outbreak of cholera or any other water-borne diseases in an epidemic form amongst the pilgrims.

(vii) The four student engineers of the Bengal Engineering College, Sibpore, and the four student overseers of the Ahsanullah School of Engineering, Dacca, who were taken in the previous year for practical training in the department duly completed their course. Fresh batches of three students from the former and five from the latter were admitted during the year under review.

(viii) Training in elementary sanitary engineering was given to the students of the Sanitary Inspectors' classes of the 26th and 27th sessions of the year, and the examinations held.

F. C. GRIFFIN, M.INST.C.E., M.I.E. (IND.),

Chief Engineer, Public Health Department, Bengal.

CALCUTTA :

The 30th April 1931.

Appendices

APPENDIX

Statistics with regard to Municipal

No.	Name of municipality.	Year of completion.	Area served.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1930.	Total capital expenditure during 1930.
1	2	3	4	5	6	7	8	9
1	Burdwan	..	1884	Sq. miles. 3·30	35,000	446,023	12·74	Rs. 5,74,495 39
2	Myimensingh	..	1893	2·50	25,200	332,113	13·17	4,62,131 1,399
3	Howrah	..	1896	10·10	195,300	3,979,642	20·37	39,52,407 73,769
4	Berhampore	..	1899	6·00	26,670	318,109	11·93	3,77,144 4,872
5	South Suburban	..	1904	3·00	17,000	45,410	2·6	66,558 196
6	Garulia	..	1904	1·25	13,000	209,580	16·12	9,551 322
7	Tittaghur	..	1905	1·50	52,454	1,608,000	30·00	17,929 ..
8	Bhatpara	..	1906	1·50	46,000	92,000	2·00	2,28,640 14,374

Waterworks in Bengal, 1930.

Annual cost of maintenance. 10	Cost of delivery of 1,000 gallons (working charges only). 11	Source of supply. 12	Type of filters employed. 13	Type of engines and pumps. 14
				Rs.
33,831	1·47	River Banka ..	Five slow sand filter beds.	Two Tangye's horizontal erude oil cold starting type engincs, rated 77 B. H. P.; 28" single stage low lift type Tangyc's centrifugal pumps direct belt driven, capacity of each 52,000 gallons per hour, average total lift 39'. Two Tangye's Triplex single acting horizontal plunger pumps. The shaft is coupled direet with the engine by a friction eluteh and the pumps are driven through a single reduction, helical gearing. Capaeity of each pump 47,000 gallons per hour. Average total lift 96·34'. One Tangye's "AA" type oil engine 2 $\frac{3}{4}$ " B. H. P. single cylinder for workshops One Lancashire boiler and one horizontal compound Worthington condensing pumping engine.
47,188	2·49	River Brahmaputra.	Ditto ..	Three condensing eomponent Worthington Duplex pumping engines and one triple expansion horizontal Worthington Duplex high and low lift combined pumping steam engine; total lift 72'. One loeo type boiler and one Babcock and Wilcox water type boiler.
1,97,680	1·63	River Hooghly ..	Ten slow sand filter beds.	For unfiltered water. Two vertical high speed uniflow engines direet coupled with two 20". Worthington low lift centrifugal pumps. Average total head—34 feet. For filtered water—One Worthington vertical triple expansion flywheel triplex pumping cngine. One Worthington horizontal triple expansion Duplex pumping cngine. Two horizontal eomponent condensing Duplex pumping cngines by Evans and Dean. Average total head 92' five Lancashire Boilers.
32,027	3·38	River Bhagirathi	Two slow sand filter beds.	<i>Filtered water pumping station</i> —Two compound horizontal condensing Duplex Worthington pumping engines. Average total lift 90·3'. Two loeo type boilers. <i>Unfiltered water pumping station</i> —One Sisson high speed Tandem compound, non-condensing engine, direct coupled to one 8" Worthington slow speed low lift centrifugal pump. One vertical Cochran boiler of the multitubular type on a barge. One Tangye's semi-diesel erude oil engine, 24 B. H. P. One Tangye's centrifugal pump direct belt driven on a barge—Average total lift 55'.
3,435	·37	Calcutta Water-works.		
..	..	Supplied from local mills.		
..	..			
..	..			

No.	Name of municipality.	Year of completion.	Area served. Sq. miles.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1930.	Total capital expenditure during 1930.
1	2	3	4	5	6	7	8	9
9	Narayanganj (west bank of the river).	1908	3·00	30,600	325,125	10·62	2,53,312	..
10	Tollygunge	..	5·75	21,700	69,000	3·24	66,352	770
11	Champdany	..	1·50	20,000	376,200	16·04	..	..
12	Dacca	..	7·0	117,900	2,019,638	17·13	16,33,854	41,645
13	Munshiganj	..	1·00	4,000	13,000	3·25	41,917	..
14	Barisal	..	3·50	26,744	109,753	3·1	2,14,521	..
15	Chandpur	..	·093	6,000	15,250	2·5	60,117	27,660
16	Darjeeling	..	4·85	23,000	630,137	27·39	6,34,454	1,671
17	Perojpur	..	0·50	2,283	1,600	·50*	21,949	1,481
18	Kurseong	..	2·00	6,000	150,000	25·00	1,10,241	..
19	Hooghly-Chinsura	1914	5·00	29,940	456,980	15·26	6,20,459	..
20	Jessore	..	4·00	8,000	37,600	4·6	1,96,874	64

*Total quantity of supply is not ascertained. Previous year's figure given.

Annual cost of maintenance.	Cost of delivery of 1,000 gallons (working charges only).	Source of supply.	Type of filters employed.	Type of engines and pumps.
10	11	12	13	14
Rs.	Annas.			
27,160	2·4	River Sitalakhya	One Jewell gravity filter.	Two loco type boilers. N. H. P. 12. Duplicate sets of Worthington horizontal triple expansion, surface condensing, combined high and low lift pumping engines, average total lift 140'.
6,855	1·81	..	..
..	..	Supplied from local mills.	..	
89,837	1·81	River Buriganga	Six Jewell gravity filters 18' diameter each.	Two sets of horizontal Worthington triple expansion, combined high and low lift pumping engines. Average total lift 74·5'.
			Two Paterson gravity filters.	
4,030	10·01	River Dhaleswari	Two Jewell pressure filters.	Two Babcock and Wilcox water tube boilers, N. H. P. 76, fitted with superheaters—Green's economiser. Working pressure 160 lbs. sq.
13,489	3·83	River Barisal ..	Three slow sand filter beds.	Two horizontal Worthington Duplex piston pattern non-condensing pumping engines. Two vertical cross tube boilers, N. H. P. 5, average total lift 74'.
				Two loeo type boilers.
4,374	6·93	River Meghna ..	Two Jewell pressure filters.	Two horizontal Worthington Duplex piston pattern non-condensing pumping engines. Two vertical cross tube boilers. N. H. P. 5, average total lift 74'.
41,762	0·04	30 Springs on Senehal spur.	..	For subsidiary service to St. Paul's School and three adjacent properties, two 10 H. P. Motors, one Rees Roturbo pump and one Hayward Taylor duplicate plunger pump.
..	..	Reserved tank ..	Two slow sand filter beds.	Two kite motion hand pumps.
10,037	1·39	Spring in the forest of Sepoy-dhara.	Two Jewell pressure filters.	Gravity supply.
31,348	2·50	River Hooghly ..	Three slow sand filter beds.	Two Worthington horizontal triple expansion surface condensing pumping engines. Average total lift 116·7'. Two vertical high speed compound Sisson engines direct coupled with two 10" medium lift centrifugal pumps. Three Babcock and Wilcox boilers, 343 sq. ft. heating surface each, 150 lbs. working pressure.
6,793	6·12	Reserved tank and tube well.	Three Paterson's gravity filters.	Two Tangye's kerosine oil engines of 12 B. H. P. each. Four 4" centrifugal pumps (Tangye). One Broom and Wad's air compressor. All countershaft belt driven. Average total lift 47·5'.

No.	Name of municipality.	Year of completion.	Area served. Sq. miles.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1930.	Total capital expenditure during 1930.
1	2	3	4	5	6	7	8	9
21	Khulna	..	1914 2·00	10,000	73,797	7·38	1,19,543	26
22	Serampore	..	1914 1·62	33,200	288,498	8·68	3,17,118	840
23	Bankura	..	1916 2·5	17,935	107,483	5·77	1,17,341	320
24	Chittagong	..	1916 4·25	40,000	436,444	10·9	3,88,839	6,996
25	Baranagore	..	1918 0·82	8,000	31,791	3·9	15,173	..
26	Uttarpara	..	1918 0·75	8,666	1,02,053	11·78	1,93,618	860
27	Nator	..	1919 1·60	7,000	18,808	2·34	1,04,492	..
28	Rajbari	..	1919 0·76	3,200	16,000	5·3	63,908	..
29	Satkhira	..	1919 2·50	7,500	1,328	1·77	80,539	279

Annual cost of maintenance	Cost of delivery of 1,000 gallons (working charges only).	Source of supply.	Type of filters employed.	Type of engines and pumps.
10	11	12	13	14
Rs.	Annas.			
9,433	3·36	Reserved tank and river.	One Paterson's gravity filter.	<i>Low lift from river to reserved tank:</i> One Worthington Duplex horizontal piston pattern pumping engine. One vertical boiler, N. H. P. 8 Medium lift <i>Unfiltered water from reserved tank to the settling tanks.</i> Two Gwyne's centrifugal pumps each having a capacity of 7,500 gallons per hour. <i>High lift.</i> Two Gwyne's centrifugal pumps for filter water each having a capacity of 7,500 gallons per hour. All these centrifugal pumps are driven by two Blackstone spring injection type cold starting crude oil engines of 9 B. H. P. each, direct belt driven. Average total lift 75·8'.
40,505	5·76	River Hooghly ..	Filter water is taken from Howrah Waterworks.	Two horizontal double-acting condensing Duplex pumping engines. Average total lift 110'. Two Cornish boilers.
6,924	2·14	River Gandheswari	Two filtration galleries.	Two semi-diesel crude oil engines, one Petter's vertical two-cycle and one Campbell horizontal four-cycle direct belt driven. Two horizontal Worthington Duplex pumps. Total average lift 150'.
41,901	3·33	Three bore holes	Paterson's iron eliminating plant and two low gravity type filters.	Two horizontal triple expansion surface condensing flywheel steam engines driving direct two double-acting plunger pumps for high lift and air compression for low lift. Two Lancashire boilers; Average total lift 104'.
5,663	6·79	Supplied from local mills.		
13,505	3·7	River Hooghly ..	One Paterson's low gravity type filter.	Two sets of Tangye's centrifugal pumps, consisting of three in each set, driven by two Tangye's patent semi-diesel crude oil engines. Countershaft belt driven; Average total lift 63·7'.
3,496	6·29	Reserved tank and tube well.	One Jewell pressure filter.	Two Worthington Ingico oil engine of 4 B. H. P. Two Worthington "A" type horizontal double acting power pumps capacity of each pump per hour 3,000 gallons. Direct belt driven. Average total lift 65'.
2,625	3·66	Ditto ..	Ditto ..	Two 3 B. H. P. Petter's Two-cycle vertical kerosine oil engines. Two "A" type double acting horizontal Worthington single power pumps, capacity 1,500 gallons per hour. Direct belt driven; Average total lift 55'.
3,294	6·50	Reserved tank ..	One Mather and Platt's mechanical pressure filter.	Mather and Platt's turbine centrifugal pump of 4,000 gallons per hour capacity, average total lift 70·7', countershaft belt driven by two Campbell's crude oil engines of 9 B. H. P. each; one chemical pump, plunger type, for pumping coagulant.

No.	Name of municipality.	Year of completion.	Area served.	Approximate population served.	Average daily supply in gallons.	Average daily supply per head of population in gallons.	Total capital expenditure up to 1930.	Total capital expenditure during 1930.
1	2	3	4	5	6	7	8	9
			Sq. miles.				Rs.	Rs.
30	Noakhali	..	1920	..	2,500	4,550	1·82	37,172
31	Kalimpong	..	1922	1·50	7,216	122,028	16·91	7,94,513
32	Krishnagar	..	1922	7·00	22,300	161,896	7·2	4,11,698
33	Comilla	..	1925	2·58	25,914	107,089	4·13	4,52,998
34	Bhadreswar	..	1926	1·77	20,000	218,082	10·90	..
35	Midnapore	..	1926	3·00	24,500	386,218	15·76	5,39,668
36	Ranigunge	..	1927	1·80	14,450	107,996	7·47	3,25,706
37	Suri	..	1927	3·00	8,915	48,057	5·39	2,31,916
38	Naihati	..	1928	1·68	23,300	221,386	9·5	1,95,296
39	Faridpur	..	1929	5·0	14,000	47,198	3·37	1,55,819
40	Patuakhali	..	1929	2·00	5,000	14,371	2·87	1,23,317
41	Asansol	..	1930	..	..	..	..	3,33,918
42	English Bazar	..	In pro-gress.	..	..	..	..	6,552
43	Narayanganj (east bank).		In pro-gress.	..	..	..	..	35,966
	Total	..	..	..	..	..	14,625,239	5,77,537

Annual cost of maintenance.	Cost of delivery of 1,000 gallons (working charges only).	Source of supply.	Type of filters employed.	Type of engines and pumps.
				14
Rs.	Annas.			
2,465	22·8	Reserved tank ..	Chlorinating apparatus.	One vertical boiler and one Worthington Duplex non-condensing pumping engine.
11,594	2·50	River Rilli ..	..	Gravity supply.
16,436	3·03	River Jalangi ..	One Jewell mechanical gravity filter.	Two Ransomes, Sims and Jefferies semi-diesel engine. 15 B. H. P. each. Two Ransomes, Sims and Jefferies semi-diesel engines, 10 B. H. P. each. Two Worthington 2½" high lift centrifugal pumps. Two Worthington 3" medium lift pumps and one 6" Worthington low lift centrifugal pump. All direct belt driven. Total average lift 43·9'.
13,694	3·95	Tube wells ..	One Paterson pressure filter.	Two 9½ B. H. P. high compression type crude oil engines, one 10 B. H. P. high compression cold starting crude oil engines—of Campbell Gas Engine Co. Three Worthington triplex Ram pumps, direct belt driven. Average total lift 93·4'.
..	..	Supplied from local mills.		
16,548	1·44	River Cossye ..	Two filtration wells	Two 42 B. H. P. Campbell horizontal crude oil engines driving two vertical treble Ram pumps. Direct belt driven. Average total lift 135'.
10,768	2·69	River Damodar	Filtration well ..	Two Campbell high compression crude oil engines of the horizontal single cylinder ordinary cold starting type 23—26 B. H. P. each. Two Campbell vertical treble Ram water pumps, capacity 12,500 gallons per hour each. Direct belt driven. Average total lift 174·5'.
8,920	4·45	River Mourakhi	Infiltration gallery	Two three-throw Ram pumps of 7,500 gallons capacity each, direct belt driven by two 15 B. H. P. Campbell high compression horizontal heavy oil engines. Average total lift 135·7'.
2,417	..	Supplied from local mills.		
12,014	11·15	Tube well ..	Iron eliminating plant and Jewell gravity filter.	Two Crossley's vertical two-cycle crude oil engines. 10 B. H. P. each, driving two Worthington low lift centrifugal pump and two Worthington high lift centrifugal pumps and lime apparatus. Countershaft belt driven.
1,779	3·35	Reserved tank ..	One Kennicot pressure filter.	Two Evan's power pumps. Two 3 B. H. P. Petter's vertical kerosine oil engines. Direct belt driven. Pumping capacity of the pump is 300 gallons per hour. Average total lift 46'.
..	..	River Damodar	Infiltration gallery	Two General Electric "Witton frame enclosed ventilated type slip ring induction electric motors of 49 B. H. P. each, 400 volts A. C. direct coupled with two Sulzer high lift centrifugal pumps. Capacity 22,000 gallons per hour each. Average total lift 270'.
..	..	Two tube wells.		
..	..	Ditto.		
..	..			

APPENDIX II.

**Total expenditure on Drainage and Sewerage Works in the municipalities
in Bengal up to 31st December 1930.**

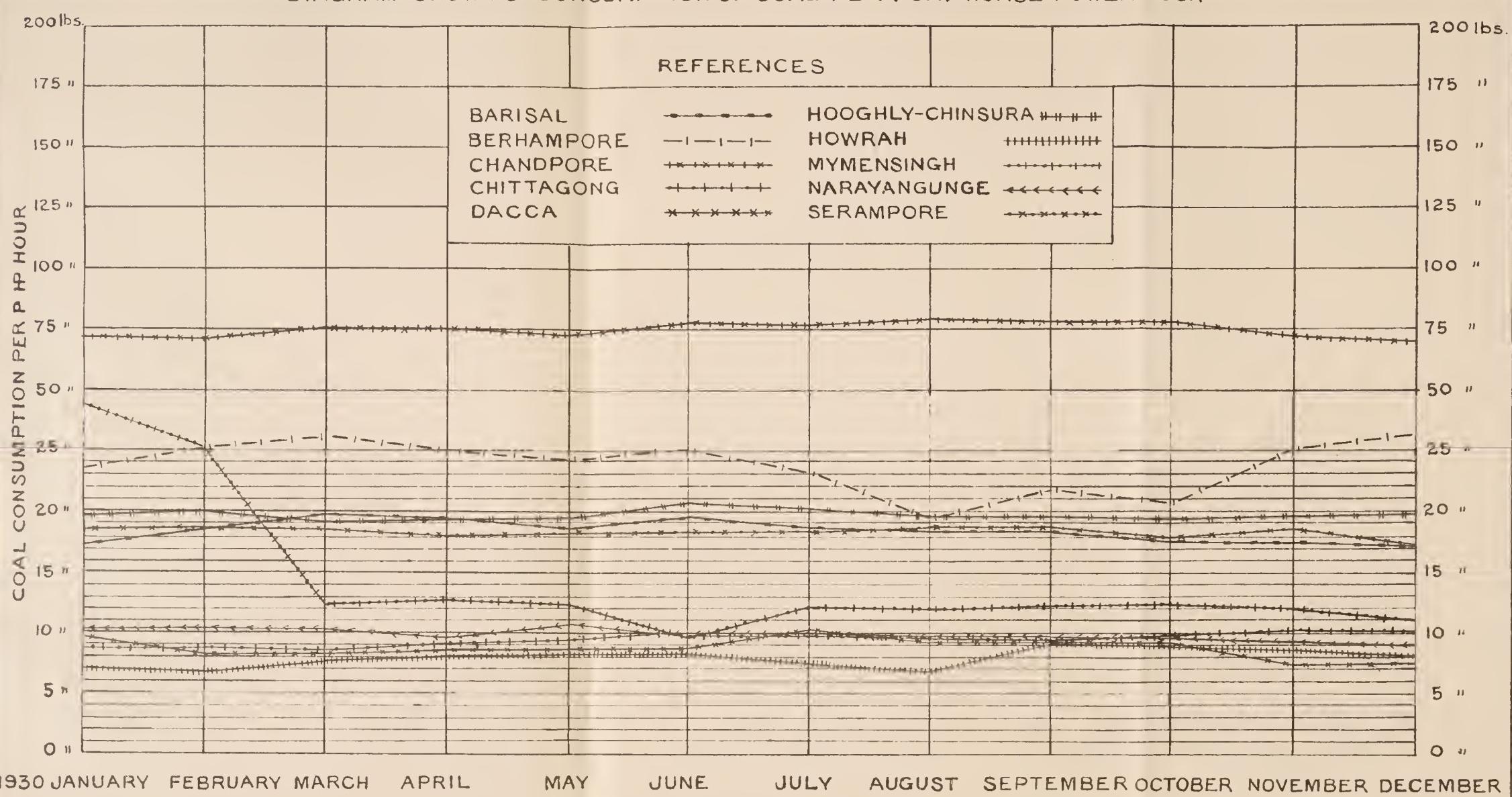
No.	Name of municipality.	Area served.	Approximate population served.	Total capital cost up to 31st December 1930.	Total capital expenditure during 1930.	Annual cost of maintenance.
1	2	3	4	5	6	7
		Sq. mile		Rs.	Rs.	Rs.
1	Darjeeling	.. ..	4·85	23,000 1,64,630	2,041	4,134
2	Howrah	.. ..	2·91	97,084 13,55,462	31,634	47,155
3	Burdwan	.. ..	4·00	28,000 1,81,874	523	362
4	Kurseong	.. ..	2·00	4,000 2,54,824	545	2,656
5	Khulna	.. ..	1·50	8,000 14,349	..	1,765
6	Bhatpara	.. ..	3·70	50,000 3,73,925	1,58,277	10,541
7	Tittaghur	.. ..	1·50	52,454 12,19,229	47,246	10,250
8	Garulia	.. ..	1·13	12,000 52,566	..	80
9	Budge-Budge	.. ..	2·00	5,612 81,218	..	1,780
10	Basirhat	.. ..	8·50	19,268 19,320	250	937
11	Barasat	.. ..	3·50	5,500 24,809	..	..
12	Baruipur	.. ..	1·20	5,114 17,209	..	394
13	Baranagore	.. ..	0·82	17,750 68,967	485	2,493
14	Krishnagar	.. ..	..	16,000 28,000	..	..
15	Berhampore	.. ..	6·00	26,670 53,681	231	4,688
16	Englishbazar	.. ..	2·00	11,000 30,817	662	423
17	Ranaghat	.. ..	1·50	8,000 43,981	343	53
18	Kushtia	.. ..	0·55	5,000 35,889	386	1,022
19	Utterpara	.. ..	0·55	4,500 28,217	8,783	1,040
20	Chandpur	.. ..	0·059	2,450 1,723	..	1,092
21	Bankura	.. ..	.. 04	4,000 10,002	..	..
22	Katwa	.. ..	1·00	6,822 55,709	..	1,096
23	Bhadreswar	.. ..	0·30	10,500 28,943	..	750
24	Tangail	.. ..	2·19	3,000 22,052	..	499
25	Champdany	.. ..	2·00	20,000 1,49,090	4,949	..
26	Serampore	.. ..	0·024	1,800 22,201	..	26
27	Dacca	.. ..	2·85	66,500 24,59,010	14,041	11,791
28	Jangipur	.. ..	3·00	11,000 47,254	..	15
29	Narayanganj	.. ..	0·03	2,500 4,456	1,428	2,360
30	Kalimpong and Bazar (in progress).	..	..	.. 63,716	24,648	..
31	Suri (in progress)	.. ..	..	.. 36,321	22,533	1,020
32	Rangpur	.. ..	..	.. 91,591*	..	..
	Total	.. ..	..	74,41,035	3,19,005	..

* Reconstruction of Goghat Bridge.

APPENDIX III

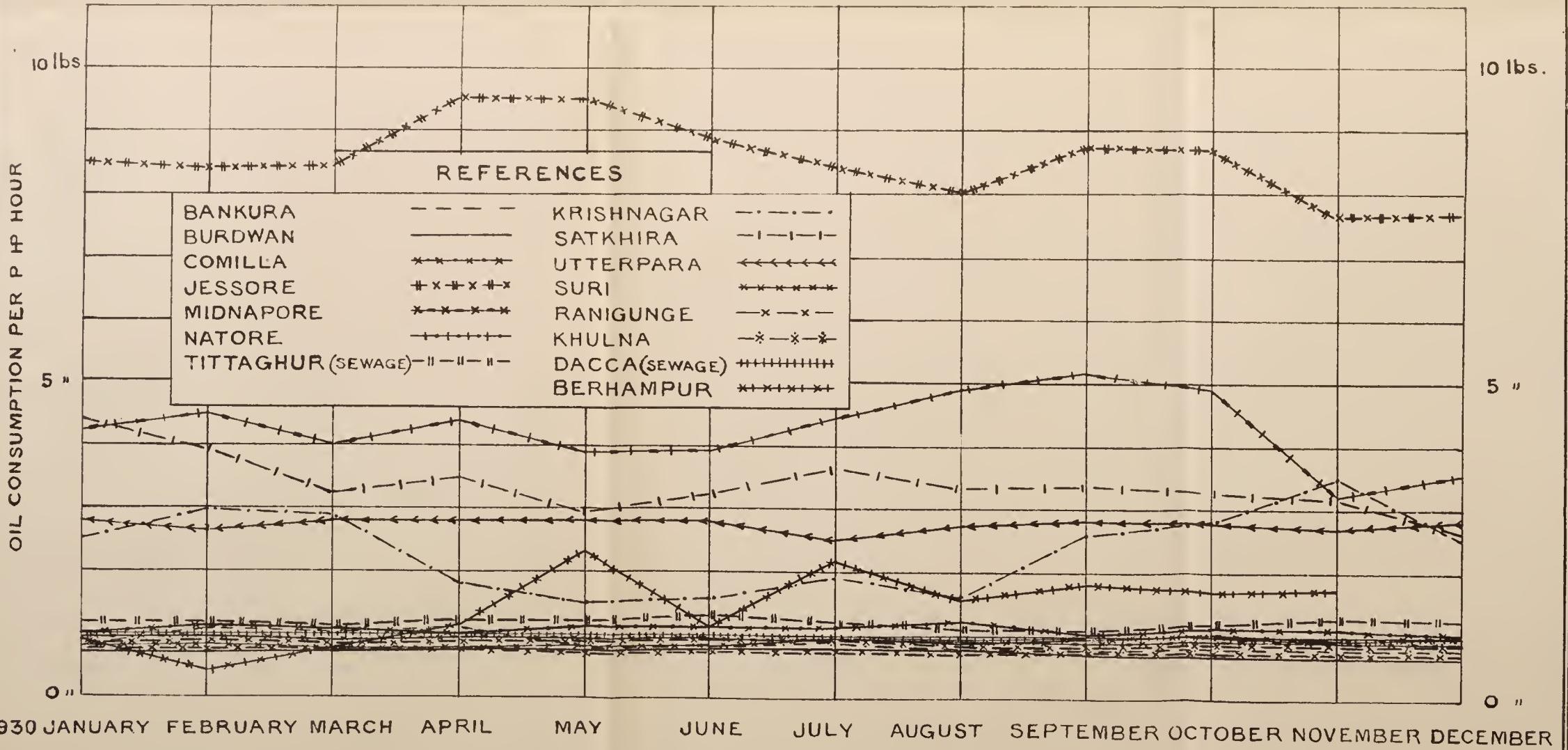
WATER WORKS AND SEWAGE PUMPING STATIONS IN BENGAL, 1930.

DIAGRAM SHOWING CONSUMPTION OF COAL PER PUMP HORSE POWER HOUR



1930 JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

DIAGRAM SHOWING CONSUMPTION OF OIL PER PUMP HORSE POWER HOUR



1930 JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

Part IV
Appendices

Appendix I

Vital Statistics of the Districts of Bengal for the year 1930

Annual Form No. I.—BIRTHS registered in the districts of the Bengal Presidency during the year 1930.

No.	Districts.	Population according to Census of 1921.			Number of births registered (exclusive of still-births).			Ratio of births per 1,000 of population.			Excess of births over 1,000 of population.			Excess of deaths over 1,000 of population.			Excess of deaths over 1,000 of population.			Mean ratio of births per 1,000 during previous five years.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.			
1	Burdwan Division.	732,369	706,557	1,438,926	18,634	17,676	36,310	12.9	12.3	25.2	105	1.7	..	16.0	14.9	30.9	40.2	36.1	29.9	30.9		
2	Burdwan	..	422,986	424,584	1,847,570	17,855	17,046	34,901	21.1	20.1	41.2	104	12.5	..	20.5	19.7	40.2	..	..	..	..
3	Birbhum	..	509,334	510,607	1,019,941	16,032	15,053	31,086	15.7	14.8	30.5	106	5.1	..	18.5	17.5	36.1	..	..	..	..
4	Bankura	..	1,339,652	1,327,008	2,666,660	38,208	36,017	74,225	14.3	13.5	27.8	106	6.9	..	15.3	14.6	29.9	..	..	..	..
5	Midnapur	..	1,561,268	518,874	1,080,142	13,603	12,237	25,840	12.6	11.3	23.9	111	3.5	..	13.1	11.9	25.0	..	..	..	..
6	Hooghly	..	535,151	462,252	997,403	12,924	11,896	24,820	12.9	11.9	24.8	108	3.6	..	14.2	12.8	27.0	..	..	..	..
7	Presidency Division.	1,324,060	1,134,732	2,458,792	33,322	30,181	63,503	13.5	12.3	25.8	110	7.5	..	11.0	10.0	21.0	..	..	..	..
8	24-Parganas	..	724,248	726,227	1,077,264	12,372	10,779	23,151	11.5	10.0	21.5	114	7.4	..	9.8	8.7	18.6	..	..	..	..
9	Calcutta	..	761,345	628,742	1,487,572	21,214	19,253	40,467	14.3	12.9	27.2	110	6.6	..	5.6	15.9	32.9	..	..	..	..
10	Nadia	..	628,742	633,772	1,262,514	25,301	23,637	48,938	20.0	18.7	38.7	107	7.5	..	21.8	20.6	42.3	..	..	..	..
11	Murshidabad	..	893,592	828,627	1,722,219	17,382	16,130	33,512	10.1	9.4	19.5	107	6.3	..	12.5	11.4	23.9	..	..	..	..
12	Jessore	..	757,524	695,510	1,453,034	19,628	17,814	37,442	13.5	12.3	25.8	110	6.3	..	15.4	14.2	29.6	..	..	..	..
13	Rajshahi Division.	767,370	722,305	1,489,675	20,350	19,273	39,623	13.7	12.9	26.6	105	..	..	4.1	16.4	15.6	32.0	..	..	..	..
14	Rajshahi	..	896,400	808,953	1,705,353	24,187	21,973	46,160	14.2	12.9	27.1	110	5.8	..	16.7	15.8	32.5	..	..	..	..
15	Dinajpur	..	503,397	432,872	936,269	15,821	14,962	30,783	16.9	16.0	32.9	105	4.1	..	17.8	16.5	34.3	..	..	..	..
16	Jaiparguri	..	149,094	133,654	282,748	5,023	4,974	9,997	17.8	17.6	35.3	101	2.1	..	15.0	13.8	28.7	..	..	..	..
17	Darjeeling	..	1,316,840	1,191,014	2,507,854	31,212	29,277	60,489	12.4	11.7	24.1	106	6.5	..	13.2	12.2	25.4	..	..	..	..
18	Rangpur	..	538,727	509,879	1,048,606	13,402	12,695	26,097	12.8	12.1	24.9	105	6.5	..	13.0	12.8	25.0	..	..	..	..
19	Bogra	..	706,702	682,792	1,389,494	16,696	14,566	31,262	12.0	10.5	22.5	114	4.7	..	13.2	12.2	25.4	..	..	..	..
20	Pabna	..	492,822	492,843	985,665	13,994	13,164	27,158	14.2	13.3	27.5	106	..	..	17.7	16.4	34.1	..	..	..	..
21	Dacca Division.	1,572,220	1,553,747	3,125,967	43,346	40,818	84,164	13.1	12.9	26.9	106	5.6	..	14.3	13.1	27.4	..	..	..	..
22	Dacca	..	2,510,450	2,327,280	4,837,730	60,944	55,246	116,190	12.6	11.4	24.0	116	7.8	..	13.0	11.9	25.0	..	..	..	..
23	Mymensingh	..	1,147,742	1,102,116	2,249,858	31,849	28,624	60,473	14.1	12.7	26.9	111	9.0	..	15.1	13.6	28.7	..	..	..	..
24	Faridpur	..	1,343,163	1,280,593	2,623,756	35,763	33,613	69,376	13.6	12.8	26.4	106	..	..	14.9	13.5	28.4	..	..	..	..
25	Chittagong Division.	777,882	833,540	1,611,422	25,194	22,740	47,934	15.6	14.1	29.7	110	9.4	..	15.4	13.6	29.0	..	..	..	..
26	Chittagong	..	738,722	734,064	1,472,786	26,807	24,077	50,884	18.2	16.3	34.5	111	14.1	..	17.2	15.5	32.8	..	..	..	..
27	Noakhali	..	1,406,134	1,336,939	2,743,073	32,821	30,325	63,146	12.0	11.0	23.0	108	7.7	..	12.2	11.0	23.1	..	..	..	..
28	Total for the Bengal Presidency.	24,057,936	22,464,357	46,522,293	643,885	594,046	1,237,931	13.8	12.8	26.6	108	4.2	..	14.9	13.7	28.7	..	..	..	..

Annual Form No. II.—BIRTHS and DEATHS registered in the districts of the Bengal Presidency during the year 1930.

Deaths per 1,000 of population from—

Mean ratio of deaths per 1,000
during previous five years.

No.	Districts.	Deaths per 1,000 of population from—						All causes. Male. Female. Total.	All other causes. Male. Female. Total.	Injury. Respiratory diseases. Dysentery and diarrhoea.	Plague. Fever.	Small-pox.	Cholera.
		All causes. Male. Female. Total.	All other causes. Male. Female. Total.	All causes. Male. Female. Total.	All other causes. Male. Female. Total.	All causes. Male. Female. Total.	All other causes. Male. Female. Total.						
Burdwan Division.													
1	Burdwan	.9	.2	16.3	.9	1.6	.4	3.1	23.5	25.6	25.4	25.2	25.4
2	Birbhum	.7	.2	21.4	.6	1.9	.4	3.5	28.5	28.3	27.7	27.0	27.7
3	Bankura	.5	.2	15.9	1.3	2.1	.4	4.9	26.0	25.5	24.9	24.2	24.9
4	Midnapur	1.1	.1	12.2	1.1	1.5	.5	4.4	21.2	20.6	20.9	23.6	23.4
5	Hooghly	.9	.5	11.3	1.4	2.8	.5	2.9	20.0	20.8	20.4	24.5	24.1
6	Howrah	2.0	.6	6.7	3.1	3.7	.6	4.5	20.4	21.2	20.8	27.3	26.5
Presidency Division.													
7	24-Parganas	1.9	.3	..	9.5	1.6	.6	3.4	17.8	18.8	22.4	23.1	22.7
8	Calcutta	1.6	1.7	..	3.2	8.7	.7	10.0	23.7	28.9	45.0	45.0	32.8
9	Nadia	1.8	.1	..	25.3	1.0	.6	3.4	32.9	32.7	31.1	31.2	31.2
10	Murshidabad	1.2	.2	..	24.1	.3	.6	5.0	33.3	30.8	32.3	30.4	31.3
11	Jessore	1.2	.1	..	21.9	.4	.5	2.0	27.1	26.9	30.2	29.9	30.1
12	Khulna	1.0	.03	..	12.0	.5	.8	4.6	19.3	19.6	25.1	25.1	25.1
Rajshahi Division.													
13	Rajshahi	.4	.01	..	25.9	.3	.3	3.2	30.3	31.1	33.4	33.0	33.2
14	Dinajpur	.6	.1	..	24.8	1.0	1.0	5.7	27.9	27.9	32.5	32.4	32.4
15	Jalpaiguri	..	.1	.02	15.8	1.8	3.9	3.0	26.0	26.0	27.2	27.2	27.5
16	Darjeeling	..	.04	..	19.4	1.9	3.4	6.2	30.9	31.7	31.2	30.7	30.6
17	Rangpur	..	.9	..	18.1	.7	.8	2.1	21.8	22.2	26.7	26.7	26.7
18	Bogra	..	.3	..	15.0	.4	.4	1.9	18.1	18.8	21.2	21.2	21.0
19	Pabna	..	1.1	..	21.0	.3	.5	2.1	25.3	25.6	25.0	23.8	24.4
20	Malda	..	1.3	..	27.5	.2	.3	2.5	33.8	30.7	32.2	30.0	27.1
Dacca Division.													
21	Dacca	2.1	.7	..	11.8	1.5	1.0	2.2	21.8	20.9	21.3	22.0	21.3
22	Mymensingh	1.0	.1	..	11.0	1.4	1.3	3.1	16.2	16.2	19.7	19.7	19.7
23	Faridpur	2.3	.4	..	16.5	1.0	1.0	3.0	25.5	25.0	26.1	24.8	25.5
24	Bakarganj	1.0	.05	..	10.5	.4	.1	.6	17.8	17.1	17.4	24.2	23.6
Chittagong Division.													
25	Chittagong	.4	.2	..	17.3	.3	.3	.5	21.4	19.1	20.3	25.5	24.0
26	Noakhali	.9	.1	..	12.7	1.4	1.2	.5	20.2	20.5	20.4	23.5	23.4
27	Tippera	1.4	.2	..	9.3	.7	.5	.1	15.4	15.3	17.1	16.3	16.7
Total for the Bengal Presidency.													
		1.2	.2	..	15.1	.8	1.2	.4	22.4	22.5	24.7	25.0	24.8

Annual Form No. III.—DEATHS registered in the districts of the Bengal Presidency during each month of the year 1930.

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No.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Burdwan Division.														
1	Burdwan	3,489	2,887	3,061	2,644	1,976	1,810	2,133	2,662	3,687	4,099	33,817	33,817	
2	Birbhum	2,156	1,736	2,124	2,492	1,548	1,535	1,530	1,734	1,901	2,463	2,853	24,338	
3	Bankura	2,507	1,894	2,567	2,710	1,842	1,412	2,064	1,756	2,381	2,336	2,462	25,936	
4	Midnapur	6,345	6,126	5,864	5,106	3,563	3,402	2,882	3,041	3,235	4,353	5,168	55,730	
5	Hooghly	2,076	1,833	1,859	1,779	1,694	1,578	1,373	1,597	2,039	2,388	2,251	22,045	
6	Howrah	2,433	1,980	2,068	2,190	1,647	1,407	1,289	1,448	1,609	1,827	1,905	21,202	
Presidency Division.														
7	24-Parganas	5,802	4,903	4,390	3,820	3,173	2,514	2,857	2,894	3,099	3,315	4,732	44,894	
8	Calcutta	3,306	2,721	3,077	3,087	2,838	2,211	2,423	2,200	2,068	2,214	2,671	31,135	
9	Nadia	6,160	4,319	3,131	4,499	4,128	2,752	2,078	2,542	3,062	5,633	6,586	48,818	
10	Murshidabad	4,361	2,895	2,803	3,780	3,370	2,314	2,091	2,183	2,817	3,996	4,968	40,481	
11	Jessore	7,388	4,615	3,420	4,159	3,314	2,199	2,537	2,433	2,553	3,478	4,293	46,521	
12	Khulna	..	3,680	2,281	2,510	2,439	1,605	1,900	1,763	2,093	2,248	2,654	28,323	
Rajshahi Division.														
13	Rajshahi	5,094	3,804	3,673	3,697	3,526	2,713	2,641	2,691	3,620	4,035	4,377	5,837	
14	Dinajpur	5,728	4,411	3,339	4,101	3,242	3,379	3,272	2,728	3,381	4,543	5,166	47,595	
15	Jalpaiguri	2,009	2,116	1,710	1,652	2,174	2,337	2,298	1,532	2,312	2,218	2,385	25,356	
16	Darjeeling	6,631	645	594	657	731	876	769	755	952	818	658	7,837	
17	Rangpur	5,233	3,704	3,344	4,109	3,974	4,108	3,343	4,061	4,619	4,619	8,667	55,202	
18	Bogra	2,051	1,299	1,259	1,710	1,553	972	1,401	1,562	1,321	2,030	2,054	19,346	
19	Pabna	5,940	3,354	2,526	3,385	2,915	1,652	2,058	1,820	1,714	2,881	3,062	35,399	
20	Malda	4,143	2,520	2,386	2,634	2,006	1,907	1,813	1,970	1,995	3,101	3,475	31,778	
Dacca Division.														
21	Dacca	8,110	5,155	5,458	5,719	3,269	3,704	3,365	3,596	5,228	6,602	9,046	66,710	
22	Mymensingh	9,048	6,394	6,302	5,700	5,032	5,358	4,489	5,077	6,370	8,011	10,872	78,498	
23	Faridpur	..	6,638	4,136	6,644	5,166	3,143	2,882	2,942	4,078	5,750	7,211	56,291	
24	Bakarganj	..	6,218	3,765	3,844	3,945	3,173	2,619	2,412	3,140	3,331	5,631	45,718	
Chittagong Division.														
25	Chittagong	..	2,581	2,480	3,009	2,225	2,497	2,778	2,699	2,027	3,479	2,527	3,724	32,648
26	Noakhali	..	3,639	2,318	2,155	2,832	2,708	2,317	2,689	1,777	1,831	2,063	3,592	30,006
27	Tippera	..	4,881	3,849	3,937	3,468	3,140	2,874	3,068	2,470	2,484	3,182	4,648	41,924
Total for the Bengal Presidency.														
28		121,697	87,140	85,012	94,477	81,530	65,878	64,646	61,692	69,345	84,959	103,287	124,593	1,044,256
	Ratio of deaths per 1,000 of population.	2.6	1.9	1.8	2.0	1.8	1.4	1.4	1.4	1.3	1.5	1.8	2.2	22.4

Annual Form No. IV.—Deaths registered according to AGE in the districts of the Bengal Presidency during the year 1930.

Number.	Districts.	Under one month.			Between 1 and 6 months.			Between 6 and 12 months.			Under one year.			1 year and under 5 years.			5 years and under 10 years.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	
Burdwan Division.																			
1	Burdwan	2,674	2,220	4,894	931	791	1,722	565	535	1,144	4,170	3,590	7,760	1,909	2,025	1,015	1,010		
2	Birbhum	2,323	2,025	4,348	879	794	1,673	503	538	1,038	3,705	3,354	7,059	1,625	1,670	920	920		
3	Bankura	2,147	1,752	3,899	689	645	1,334	350	358	1,708	3,186	2,755	5,941	1,385	1,469	759	757		
4	Midnapur	4,523	4,051	8,574	1,584	1,475	3,059	750	773	1,523	6,857	6,299	13,156	2,913	3,019	1,410	1,331		
5	Hooghly	1,592	1,304	2,896	597	517	1,114	298	307	605	2,487	2,128	4,615	1,194	1,229	638	574		
6	Howrah	1,445	1,172	2,617	651	569	1,220	369	370	739	2,465	2,111	4,576	1,351	1,317	717	615		
Presidency Division.																			
7	24-Parganas	2,695	2,168	4,863	1,447	1,204	2,651	845	760	1,605	4,987	4,132	9,119	2,795	2,602	1,662	1,458		
8	Caleutta	644	448	1,092	820	671	1,491	2,116	1,504	3,620	3,580	2,623	6,203	1,742	1,535	788	714		
9	Nadia	2,973	2,542	5,515	1,417	1,369	2,786	1,028	1,078	2,106	5,418	4,989	10,407	3,372	3,461	2,055	1,839		
10	Murshidabad	3,110	2,539	5,649	1,286	1,111	2,397	857	875	1,732	5,253	4,525	9,778	3,952	3,935	1,662	1,630		
11	Jessore	2,017	1,794	3,811	1,033	925	1,958	552	555	1,107	3,602	3,274	6,876	2,926	2,824	1,948	1,621		
12	Khulna	2,348	1,796	4,144	1,091	857	1,948	534	451	985	3,973	3,104	7,077	1,647	1,517	826	711		
Rajshahi Division.																			
13	Rajshahi	2,749	2,499	5,248	1,323	1,291	2,614	1,026	998	2,024	5,098	4,788	9,886	3,228	3,253	1,738	1,340		
14	Dinajpur	3,297	2,816	6,113	1,440	1,328	2,768	1,059	899	1,958	5,796	5,043	10,839	2,951	2,748	2,167	1,750		
15	Jalpaiguri	1,263	1,085	2,348	1,145	1,104	2,249	612	562	1,174	3,020	2,020	5,771	1,581	1,401	642	565		
16	Darjeeling	319	308	627	366	308	674	262	217	479	947	833	1,780	1,546	1,469	281	335		
17	Rangpur	4,364	3,612	7,976	1,982	1,982	1,650	3,632	936	875	1,811	7,282	6,137	13,419	3,680	3,730	2,426	2,001	
18	Bohra	1,631	1,376	3,007	786	786	1,468	388	376	764	2,805	2,434	5,239	1,185	1,224	706	700		
19	Pabna	2,179	1,934	4,113	1,035	929	1,964	539	579	1,118	3,753	3,442	7,195	2,726	2,717	1,483	1,293		
20	Malda	1,400	1,249	2,649	619	619	1,287	747	740	1,487	2,815	2,608	5,423	3,259	3,137	1,739	1,480		
Dacca Division.																			
21	Dacca	4,665	3,864	8,529	2,387	2,143	4,530	1,138	1,109	2,247	8,190	7,116	15,306	6,805	6,381	2,301	1,962		
22	Mymensingh	6,889	5,782	12,671	2,324	2,048	4,372	1,663	1,456	3,119	10,876	9,286	20,162	5,409	5,165	2,632	2,189		
23	Faridpur	3,319	2,701	6,020	1,914	1,657	2,571	912	821	1,733	6,145	5,179	11,324	5,796	5,357	2,051	1,683		
24	Bakarganj	3,464	2,937	6,401	1,705	1,413	3,118	884	769	1,653	6,053	5,119	11,172	3,617	3,180	1,524	1,267		
Chittagong Division.																			
25	Chittagong	1,781	1,516	3,297	1,074	942	2,016	567	584	1,151	3,422	3,042	6,464	2,627	2,498	1,207	1,069		
26	Noakhali	2,290	1,822	4,112	1,072	929	2,001	537	539	1,076	3,290	3,049	7,189	3,128	3,128	1,047	1,021		
27	Tippera	2,510	2,020	4,530	1,224	1,041	2,265	694	647	1,341	4,428	3,708	8,136	3,557	3,338	1,477	1,310		
Total for the Bengal Presidency.		70,611	59,332	129,943	32,870	29,012	61,882	20,731	19,316	40,047	124,212	107,660	231,872	76,827	74,329	37,870	33,145		
Population (Census of 1921).		688,771	1,370,066	2,223,523	2,382,938	3,714,610	3,603,543	
Ratio per 1,000 of population.		181.2*	187.3*	34.5	31.2	10.2	9.2	

* Ratio per 1,000 of births.

Number.	Districts.	10 years and under 15 years.		15 years and under 20 years.		20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Burdwan Division.															
1	Burdwan	648	548	737	994	1,614	1,945	1,754	1,512	1,643	1,199	1,491	1,273	2,241	2,499
2	Birbhum	463	483	541	595	836	1,020	886	807	983	761	930	952	1,372	1,524
3	Bankura	443	412	1,144	670	1,225	1,380	1,351	1,071	1,341	2,019	964	1,237	1,793	2,142
4	Midnapur	893	686	1,388	665	2,627	3,452	3,037	2,546	2,809	1,109	823	2,303	3,976	4,310
5	Hooghly	417	451	665	1,037	1,424	1,251	1,424	1,152	957	615	915	780	1,639	1,741
6	Howrah	366	344	462	991	1,154	1,154	1,024	927	965	746	746	1,640	1,640	1,832
Presidency Division.															
7	24-Parganas	..	1,091	836	1,179	1,464	2,401	2,814	2,322	2,019	2,062	1,522	1,746	1,456	3,282
8	Calcutta	..	1,791	615	1,031	867	3,047	2,483	1,870	1,563	1,318	1,348	1,994	1,668	1,452
9	Nadia	..	1,200	956	1,094	1,452	2,157	2,719	2,612	2,110	2,477	1,732	2,167	2,536	2,688
10	Murshidabad	..	818	604	699	784	1,655	1,818	1,768	1,368	1,54	1,334	1,234	2,166	2,487
11	Jessore	..	1,073	741	1,040	1,554	2,617	3,398	3,016	2,471	2,878	2,348	1,872	2,794	2,570
12	Khulna	..	480	453	556	1,037	1,183	2,014	1,287	1,295	1,361	938	1,150	900	1,693
Rajshahi Division.															
13	Rajshahi	..	949	742	1,077	1,484	2,504	3,475	2,800	2,490	2,284	1,834	1,565	1,380	1,653
14	Dinajpur	..	1,498	1,294	1,608	1,717	2,809	3,462	2,662	2,346	2,096	1,768	1,645	1,252	1,199
15	Jalpaiguri	..	507	408	551	905	1,442	2,353	1,694	1,576	1,318	869	988	638	796
16	Darjeeling	..	230	231	277	275	595	632	521	461	401	323	302	212	462
17	Rangpur	..	1,207	1,078	1,209	1,959	2,628	3,654	2,914	2,586	2,594	1,953	2,154	1,610	1,777
18	Bogra	..	361	344	372	737	830	1,316	881	757	808	604	782	642	809
19	Pabna	..	740	526	604	1,017	1,504	2,326	1,800	1,630	1,335	1,344	1,058	2,156	2,142
20	Malda	..	891	544	783	842	1,631	1,767	1,592	1,276	1,413	1,034	943	1,488	1,497
Dacca Division.															
21	Dacca	..	1,049	988	1,056	1,874	2,442	4,023	2,657	2,500	2,504	1,793	2,336	1,723	4,100
22	Mymensingh	..	1,374	1,218	1,523	2,688	3,291	5,561	3,597	3,464	3,450	2,259	2,139	5,547	3,823
23	Faridpur	..	989	854	1,067	1,609	2,440	3,601	2,680	2,350	2,487	1,678	2,001	1,550	3,625
24	Bakarganj	..	815	609	758	1,390	1,883	3,026	1,927	2,047	1,820	1,318	1,740	1,405	3,721
Chittagong Division.															
25	Chittagong	..	621	498	659	871	1,425	2,248	1,525	1,472	1,419	1,006	1,502	1,182	2,281
26	Noakhali	..	420	372	758	409	1,071	1,851	1,982	1,164	945	853	1,033	897	1,735
27	Tippera	..	874	911	1,384	1,860	2,821	1,921	1,935	1,694	1,341	1,764	1,375	1,375	3,149
Total for the Bengal Presidency.															
Population (Census of 1921).		21,208	17,491	22,281	31,646	49,745	67,737	52,341	46,852	47,660	34,755	41,536	65,580	58,026	58,026
Ratio per 1,000 of population.		7.0	7.5	10.3	13.6	11.9	15.6	14.6	16.2	20.6	19.0	33.5	29.9	67.6	59.9

Annual Form No. V.—Deaths registered according to CLASS in the districts of the Bengal Presidency during the year 1930.

1
2

Population according to Census of 1921.

Districts.

Christians.

Hindus.

Buddhists.

Musalmans.

Presidency.

Rajshahi.

Dacca.

Chittagong.

Burdwan Division.

24-Parganas.

Rajshahi.

Dacca.

Chittagong.

Burdwan

Caleutta

Dinajpur

Mymensingh

Noakhali

Birbhum

Nadia

Jalpaiguri

Darjeeling

Rangpur

Bankura

Murshidabad

Faridpur

Bogra

Pabna

Midnapur

Jessore

Khulna

Hooghly

Khulna

Howrah

Malda

Presidency Division.

Rajshahi Division.

24-Parganas

Rajshahi

Calcutta

Dinajpur

Bankura

Jalpaiguri

Midnapur

Faridpur

Hooghly

Bogra

Howrah

Pabna

Khulna

Malda

Presidency

Dacca

Chittagong

Noakhali

Tippera

Total for the Bengal Presidency.

Population according to Census of 1921.

Number of deaths registered.

No.	Districts.	Other classes.			Total.			Christians.			Hindus.			
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
		Burdwan Division.												
1	Burdwan	23,639	22,565	46,204	732,369	706,557	1,438,926	10	8	18	13,186	12,693	25,879	
2	Birbhum	29,288	28,604	57,892	422,986	424,584	847,570	3	3	6	8,222	8,228	16,450	
3	Bankura	45,154	46,326	91,480	509,334	510,607	1,019,941	23	13	36	11,479	11,065	22,544	
4	Midnapur	63,128	65,117	128,245	1,339,652	1,327,008	2,666,660	18	10	28	24,407	23,944	48,351	
5	Hooghly	10,599	10,193	20,792	561,268	518,874	1,080,142	4	7	11	8,964	8,729	17,693	
6	Howrah	682	246	928	535,151	462,252	997,403	2	1	3	8,477	7,895	16,372	
Presidency Division.														
7	24-Parganas	6,588	5,071	11,659	1,324,060	1,134,732	2,458,792	115	80	195	15,218	13,723	28,941	
8	Calcutta	9,135	4,604	13,739	724,248	353,016	1,077,264	420	328	748	12,822	10,205	23,027	
9	Nadia	1,052	1,024	2,076	761,345	726,227	1,487,572	106	89	195	8,820	8,384	17,204	
10	Murshidabad	8,604	8,327	16,931	628,742	633,772	1,262,514	4	..	22	4	9,032	8,478	17,510
11	Jessore	15	5	20	893,592	828,627	1,722,219	17	10	28	39	8,287	8,138	16,425
12	Khulna	542	498	1,040	757,524	695,510	1,453,034	18			6,968	6,603	13,576	
Rajshahi Division.														
13	Rajshahi	15,445	14,577	30,022	767,370	722,305	1,489,675	7	11	18	3,934	3,936	7,870	
14	Dinajpur	56,672	55,006	111,678	896,400	808,953	1,705,353	26	28	54	10,958	9,676	20,634	
15	Jalpaiguri	90,182	84,478	174,660	503,397	432,872	936,269	79	76	155	5,812	5,296	11,108	
16	Darjeeling	6,662	6,187	12,849	149,094	133,654	282,748	50	51	101	3,014	2,758	5,772	
17	Rangpur	5,643	3,759	9,402	1,316,840	1,191,014	2,507,854	13	8	21	8,527	7,737	16,264	
18	Bogra	4,601	4,139	8,740	538,727	509,879	1,048,606	1	1	2	1,371	1,309	2,680	
19	Pabna	701	431	1,132	706,702	682,792	1,389,494	2	4	4	3,837	3,984	7,821	
20	Malda	38,827	38,085	76,912	492,822	492,843	985,665	2	1	3	6,832	6,313	13,145	
Dacca Division.														
21	Dacca	188	182	370	1,572,220	1,553,747	3,125,967	112	105	217	11,146	10,750	21,896	
22	Mymensingh	18,357	17,512	35,869	2,510,450	2,327,280	4,837,730	15	11	26	11,067	10,516	21,583	
23	Faridpur	46	37	83	1,147,742	1,102,116	2,249,858	61	86	147	9,913	9,673	19,586	
24	Bakarganj	63	57	120	1,343,163	1,280,593	2,623,756	56	35	91	6,384	5,980	12,364	
Chittagong Division.														
25	Chittagong	330	229	559	777,882	833,540	1,611,422	7	12	19	3,608	3,668	7,276	
26	Noakhali	..	..	..	738,722	734,064	1,472,786	6	12	12	3,302	3,334	6,636
27	Tippera	..	..	131	1,406,134	1,336,939	2,743,073	3	2	5	5,746	5,425	11,171
Total for the Bengal Presidency.		436,214	417,319	853,533	24,057,936	22,464,357	46,522,293	1,180	1,006	2,186	231,333	218,445	449,778	

Number of deaths registered.

No.	Districts.	Musalmans.			Buddhists.			Other classes.			Total.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Burdwan Division.													
1	Burdwan	2,922	2,906	5,828	..	..	..	1,104	988	2,092	17,222	16,595	33,817
2	Birbhum	..	3,017	5,968	5,985	..	..	1,010	887	1,897	12,252	12,086	24,338
3	Bankura	..	584	559	1,143	..	..	1,175	1,038	2,213	13,261	12,675	25,936
4	Midnapur	..	2,014	1,795	3,809	..	..	1,938	1,604	3,542	28,377	27,353	55,730
5	Hooghly	..	1,884	1,819	3,703	..	..	371	267	638	11,223	10,822	22,045
6	Howrah	..	2,392	2,406	4,798	..	..	25	4	29	10,896	10,306	21,202
Presidency Division.													
7	24-Parganas	..	8,145	7,543	15,688	..	5	..	49	21	70	23,527	21,367
8	Calcutta	..	3,900	3,403	7,303	..	3	..	36	13	49	17,183	13,894
9	Nadia	..	16,143	15,247	31,390	..	..	..	19	10	29	25,088	23,730
10	Murshidabad	..	11,631	10,811	22,442	..	..	..	275	250	525	20,942	19,539
11	Jessore	..	15,938	14,119	30,057	..	..	..	..	..	..	24,242	22,279
12	Khulna	..	7,672	7,038	14,710	..	..	..	3	6	9	14,661	13,662
Rajshahi Division.													
13	Rajshahi	18,712	17,970	36,682	..	..	..	..	616	522	1,138	23,269	45,708
14	Dinajpur	..	12,125	11,307	23,432	..	..	..	1,907	1,568	3,475	25,016	22,439
15	Jaiparguri	..	3,435	3,301	6,736	..	26	..	3,742	3,578	7,320	13,094	22,579
16	Darjeeling	..	179	138	317	..	..	..	556	560	1,116	4,604	12,262
17	Rangpur	..	19,972	18,555	38,527	..	..	..	205	185	205	28,717	8,837
18	Bogra	..	8,261	8,096	16,357	..	..	..	146	161	307	9,779	55,202
19	Pabna	..	13,954	13,392	27,346	..	..	..	120	108	228	17,913	19,346
20	Malda	..	8,592	7,746	16,338	..	..	..	1,224	1,068	2,292	16,650	17,486
Dacca Division.													
21	Dacca	..	22,992	21,605	44,597	..	..	..	..	231	..	34,250	66,710
22	Mymensingh	..	29,368	27,034	56,402	..	..	..	..	..	..	40,706	78,498
23	Faridpur	..	19,307	17,251	6,558	..	..	..	..	..	..	29,281	56,291
24	Bakarganj	..	17,402	15,803	33,205	..	26	..	58	..	..	23,868	45,718
Chittagong Division.													
25	Chittagong	12,434	11,680	24,114	639	600	1,239	..	..	..	..	16,688	32,648
26	Noakhali	..	11,604	11,748	23,352	..	6	..	..	..	..	14,916	30,006
27	Tippera	..	15,867	14,841	30,708	..	21	..	..	..	..	21,635	41,924
Total for the Bengal Presidency.													
25		290,446	271,081	561,527	1,524	1,395	2,919	14,777	13,069	27,846	539,260	504,996	1,044,256

Ratio of deaths per 1,000 of population.

3

No.	Districts.	Christians.			Hindus.			Musalmans.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Burdwan Division.										
1	Burdwan	4.4	4.2	4.3	23.1	23.0	23.1	21.4	22.4	21.9
2	Birbhum	12.5	13.1	12.8	28.6	28.4	28.5	28.5	27.8	28.2
3	Bankura	30.7	19.3	25.3	26.1	25.1	25.6	24.3	24.8	24.5
4	Midnapur	5.7	3.7	4.8	20.6	20.5	20.5	22.4	19.7	21.1
5	Hooghly	6.9	2.4	4.4	19.5	20.5	20.0	21.0	21.7	21.3
6	Howrah	1.1	.8	.9	19.9	21.7	20.7	22.6	24.9	23.7
Presidency Division.										
7	Parganas	12.0	10.4	11.3	17.8	18.9	18.3	18.0	19.0	18.5
8	Calcutta	18.8	18.1	18.5	25.7	40.7	30.7	20.4	43.2	27.1
9	Nadia	23.9	21.7	22.8	29.8	35.1	29.6	35.0	35.1	35.1
10	Murshidabad	15.7	14.9	15.0	31.7	34.7	30.8	31.7	31.7	33.2
11	Jessore	14.9	19.8	19.9	24.7	25.4	25.0	28.6	27.9	28.3
12	Khuina	15.0	12.6	12.6	18.7	19.0	20.3	20.3	20.4	20.3
Rajshahi Division.										
13	Rajshahi	13.8	22.3	18.0	23.6	26.0	24.7	32.0	32.3	32.2
14	Dinajpur	9.9	11.7	10.8	27.3	27.6	27.8	28.2	28.0	28.0
15	Jalpaiguri	17.6	17.9	20.1	22.6	21.6	21.6	27.5	29.1	29.1
16	Darjeeling	12.1	12.8	12.5	28.2	29.1	28.7	34.8	37.2	37.2
17	Rangpur	22.4	15.0	18.8	20.0	21.2	20.5	22.6	22.6	22.6
18	Bogra	4.5	5.6	5.0	14.6	16.2	15.4	18.8	19.0	18.9
19	Pabna	9.3	8.3	8.8	22.8	24.0	23.4	26.0	25.9	25.9
20	Malda	6.8	3.9	5.5	33.8	31.8	32.8	34.1	30.2	32.2
Dacca Division.										
21	Dacca	17.9	14.8	16.2	20.9	20.0	20.5	22.2	21.4	21.8
22	Mymensingh	7.0	5.5	6.3	17.8	19.0	18.4	15.7	15.4	15.6
23	Faridpur	18.5	28.5	23.3	24.2	23.8	24.0	26.3	24.9	25.6
24	Bakarganj	14.9	9.2	12.0	16.5	16.2	16.4	18.3	17.5	17.9
Chittagong Division.										
25	Chittagong	10.0	18.2	14.0	20.0	19.6	20.0	22.1	19.1	20.5
26	Noakhali	15.0	15.7	15.3	10.2	10.9	15.9	20.4	20.5	20.4
27	Tipperra	11.5	10.2	10.9	15.7	15.9	15.8	15.2	15.0	15.1
Total for the Bengal Presidency.		15.2	14.6	14.9	22.0	22.3	22.6	22.4	22.1	22.3

Annual Form No. VI.—Deaths registered from DIFFERENT CAUSES in the districts and towns of the Bengal Presidency during the year 1930.

161

No.	Districts and towns.	Population according to Census of 1921.	Cholera.	Small-pox.	Plague.	Fever.	Dysenteric and diarrhoea.	Respiratory diseases.	Suicide.	Wounds or accidents.	Snake-bite or killed by wild beasts.	Rabies.	Total.	10	Injury.													
														10	Injury.													
DISTRICTS (EXCLUDING TOWNS).																												
Burdwan Division.																												
1	Burdwan	1,343,185	1,303	351	..	23,089	1,089	1,977	44	48	127	14	534	367	367													
2	Birbhum	838,655	600	165	..	18,036	454	1,612	23	31	193	84	36	11	369													
3	Bankura	964,487	538	124	..	15,906	227	1,948	25	36	192	105	52	1,205	1,205													
4	Midnapur	2,595,071	2,827	286	..	32,332	799	3,532	50	68	775	260	9	525	525													
5	Hooghly	900,802	822	373	..	11,529	1,181	2,663	33	44	281	158	16	456	456													
6	Howrah	778,893	1,683	276	..	6,003	2,107	1,822	40	55	283	62	16	..	..											
Presidency Division.																												
7	24-Parganas	1,998,318	4,271	306	..	20,666	1,371	3,000	136	188	644	289	27	1,284	1,284													
8	Nadia	1,390,704	2,577	108	..	36,923	597	1,319	81	115	373	324	25	918	918													
9	Murshidabad	1,182,983	1,424	208	..	29,559	265	619	50	60	328	313	16	767	767													
10	Jessore	1,700,924	2,077	140	..	37,604	673	1,482	72	132	316	252	14	786	786													
11	Khulna	1,421,116	1,345	39	..	17,141	691	1,116	52	120	438	211	39	860	860													
Rajshahi Division.																												
12	Rajshahi	1,457,037	637	22	..	38,364	418	309	54	80	317	356	30	837	837													
13	Dinajpur	1,687,328	1,074	184	..	42,316	524	1,618	44	45	262	164	32	547	547													
14	Jalpaiguri	921,749	133	15	..	14,761	1,702	3,575	17	15	153	72	6	263	263													
15	Darjeeling	254,045	11	12	..	5,245	493	804	12	5	50	9	1	77	77													
16	Rangpur	2,482,722	2,312	489	..	45,320	1,711	1,914	32	29	380	145	24	610	610													
17	Bogra	1,032,300	327	42	..	15,611	391	413	40	40	225	121	3	429	429													
18	Pabna	1,344,633	1,458	64	..	28,980	357	716	32	55	273	141	26	527	527													
19	Malda	955,830	1,203	35	..	26,695	107	201	23	35	146	156	15	375	375													
Dacca Division.																												
20	Dacca	2,975,915	6,301	2,123	..	36,354	4,036	2,049	37	34	452	105	21	649	649													
21	Mymensingh	4,703,249	4,631	597	..	52,701	1,989	1,470	83	71	700	148	38	1,052	1,052													
22	Faridpur	2,202,783	5,158	1,005	..	36,742	2,170	2,210	42	68	379	175	23	690	690													
23	Bakarganj	2,563,849	2,607	134	..	27,238	866	337	87	1,206	1,206	171	10	1,542	1,542													
Chittagong Division.																												
24	Chittagong	1,570,760	659	302	..	27,794	444	456	5	13	759	73	11	861	861													
25	Noakhali	1,465,071	1,245	135	..	18,712	2,009	1,724	12	16	706	65	14	813	813													
26	Tippera	2,678,627	3,903	583	..	25,270	1,957	1,351	28	22	286	32	20	388	388													
27	Total of districts ..	43,411,036	51,126	8,118	..	690,891	31,628	40,237	1,135	1,527	10,418	4,118	533	17,731	17,731													

N o.	Districts and towns.	All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.									
				Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Injury.	All other causes.	For the year.	From all causes.	Mean of previous five years.
DISTRICTS (EXCLUDING TOWNS).													
1	Burdwan	..	3,733	32,076	1·0	.3	..	17·2	.8	·4	2·8	23·9	25·9
2	Birbhum	..	2,973	24,207	.7	.2	..	21·5	.6	.4	3·5	28·9	27·9
3	Bankura	..	4,651	24,763	.5	.1	..	16·5	1·2	.5	4·8	25·7	25·4
4	Midnapur	..	11,460	54,441	1·1	.1	..	12·5	1·1	.4	4·4	21·0	23·6
5	Hooghly	..	2,170	19,263	.9	.4	..	12·8	1·3	.6	2·4	21·4	25·1
6	Howrah	..	2,645	14,992	2·2	.3	..	7·7	2·7	.6	3·4	19·2	24·5
Burdwan Division.													
1	Burdwan	..	3,733	32,076	1·0	.3	..	17·2	.8	·4	2·8	23·9	25·9
2	Birbhum	..	2,973	24,207	.7	.2	..	21·5	.6	.4	3·5	28·9	27·9
3	Bankura	..	4,651	24,763	.5	.1	..	16·5	1·2	.5	4·8	21·0	23·6
4	Midnapur	..	11,460	54,441	1·1	.1	..	12·5	1·1	.4	4·4	21·4	25·1
5	Hooghly	..	2,170	19,263	.9	.4	..	12·8	1·3	.6	2·4	21·4	24·5
6	Howrah	..	2,645	14,992	2·2	.3	..	7·7	2·7	.6	3·4	19·2	24·5
Presidency Division.													
7	24-Parganas	..	6,955	37,853	2·1	.1	..	10·3	.6	·6	3·5	18·9	23·9
8	Nadia	..	4,656	47,098	1·8	.2	..	26·5	.4	.7	3·3	33·9	31·9
9	Murshidabad	..	6,078	38,920	1·2	.2	..	25·0	.3	.6	2·0	32·9	32·0
10	Jessore	..	3,410	46,172	1·2	.1	..	22·1	.9	.9	2·0	27·1	30·2
11	Khulna	..	6,652	27,844	.9	.02	..	12·1	.5	.6	4·7	19·6	25·2
Rajshahi Division.													
12	Rajshahi	..	4,544	45,131	·4	.01	..	26·3	.3	.2	3·1	31·0	33·5
13	Dinajpur	..	1,181	47,444	.6	.1	..	25·1	.3	.3	·7	28·1	32·7
14	Jalpaiguri	..	4,667	25,116	.1	.01	..	16·0	1·8	1·8	27·2	27·7	27·7
15	Darjeeling	..	1,472	8,114	.04	.04	..	20·6	2·0	3·2	3·2	31·9	31·4
16	Rangpur	..	2,553	54,909	.9	.2	..	18·2	.7	.2	1·0	22·1	26·9
17	Bogra	..	1,973	19,186	.3	.04	..	15·1	.4	.4	1·9	18·6	21·2
18	Pabna	..	2,731	34,833	1·1	.04	..	21·5	.5	.3	2·0	25·9	24·6
19	Malda	..	2,331	30,947	1·3	.04	..	27·9	.1	.2	2·4	32·4	28·8
Dacca Division.													
20	Dacca	..	11,006	62,518	2·1	.7	..	12·2	1·3	.7	·2	3·7	21·0
21	Mymensingh	..	14,425	76,865	1·0	.1	..	11·2	·4	·3	·2	3·1	19·8
22	Faridpur	..	7,582	55,557	2·3	.4	..	16·7	1·0	1·0	·6	3·4	25·7
23	Bakarganj	..	12,310	45,034	1·0	.05	..	10·6	·4	·2	·6	4·8	23·8
Chittagong Division.													
24	Chittagong	..	1,437	31,953	·4	.2	..	17·7	·3	·5	·9	20·3	24·2
25	Noakhali	..	5,206	29,844	·8	.1	..	12·8	1·2	·5	·5	3·5	23·5
26	Tippera	..	7,760	41,212	1·4	.2	..	9·4	·7	·1	·2	2·9	16·8
Total of districts ..													
			136,561	976,292	1·2	·2	..	15·9	·7	·3	·4	3·1	22·5

No.	Districts and towns.	Population according to Census of 1921.	Injury.															
			3	4	5	6	7	8	9	10	Respiratory diseases.	Dysentery and diarrhoea.	Plague.	Fever.	Suicide.	Wounds or accidents.	Snake-bite or killed by wild beasts.	Rabies.	Total.
TOWNS.																		
1	Burdwan district.		34,616	5	6	6	6	6	112	111	126	31	1	10	1	12	3	
2	Burdwan	..	8,424	5	5	8	..	2	149	26	20	..	..	..	..	3	3	
3	Kalna ..	..	6,823	8	..	2	..	..	30	8	4	1	..	1	..	3	3	
4	Katwa ..	..	4,843	7	..	2	..	..	21	10	..	3	..	..	4	4	4	
5	Dainhat ..	..	14,536	10	..	1	..	..	84	26	71	..	..	4	..	5	5	
6	Raniganj ..	..	26,499	22	..	..	..	..	41	6	30	..	..	1	..	7	7	
7	Suri ..	..	8,915	..	..	..	..	..	68	6	33	..	..	4	..	..	4	
8	Bankura district.		25,412	..	..	..	..	..	9	76	40	41	..	2	3	..	5	
9	Bankura ..	..	19,398	..	22	..	..	..	75	52	75	57	..	3	..	..	4	
10	Bishnupur ..	..	10,644	10	..	..	..	..	28	38	38	..	..	1	..	..	2	
11	Birbhum district.		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12	Midnapur ..	..	28,965	8	..	..	..	..	..	102	65	95	..	..	8	2	10	
13	Ghatal ..	..	10,770	4	..	3	..	..	..	49	47	42	..	..	7	2	10	
14	Kharar ..	..	6,580	..	..	2	..	..	..	29	23	23	..	..	..	1	1	
15	Chandrapur ..	..	6,470	..	..	1	..	..	..	39	16	51	..	..	..	2	3	
16	Ramjibhanpur ..	..	6,700	..	..	4	..	..	..	31	48	78	..	..	8	..	9	
17	Khirpal ..	..	3,756	..	..	..	..	..	..	23	20	51	..	..	..	1	1	
18	Tamluk ..	..	8,348	19	..	..	..	..	..	18	12	12	..	..	..	..	..
19	Midnapur district.		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Midnapur ..	..	28,965	8	..	3	..	..	..	..	..	..	..	..	..	..	..
21	Ghatal ..	..	10,770	4	..	1	..	..	..	..	..	..	..	..	..	..	..
22	Kharar ..	..	6,580	..	..	2	..	..	..	..	..	..	..	..	..	..	..
23	Chandrapur ..	..	6,470	..	..	1	..	..	..	..	..	..	..	..	..	..	..
24	Ramjibhanpur ..	..	6,700	..	..	4	..	..	..	..	..	..	..	..	..	..	..
25	Khirpal ..	..	3,756	..	..	..	..	..	..	..	..	..	..	..	..	..	..
26	Tamluk ..	..	8,348	19	..	..	..	..	..	..	..	..	..	..	..	..	..
27	Hooghly-Chinsura.		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
28	Hooghly-Chinsura ..	..	29,938	23	..	..	..	..	..	183	78	98	..	..	..	..	24	
29	Bansberia ..	..	6,382	20	..	5	..	..	..	67	5	20	..	..	..	..	..
30	Arambagh ..	..	7,857	17	..	4	..	..	..	57	18	38	..	..	..	..	17	
31	Serampur ..	..	33,197	30	..	..	..	..	..	39	19	81	..	..	..	..	6	
32	Rishra-Konnagar ..	..	23,259	29	..	..	..	..	..	44	28	34	..	..	..	..	2	
33	Uttarpura ..	..	8,657	16	..	7	..	..	..	29	31	19	..	..	..	..	4	
34	Kotrung ..	..	6,846	18	..	2	..	..	..	19	11	20	..	..	..	..	7	
35	Baidyabati ..	..	16,471	3	..	4	..	..	..	59	31	30	..	..	..	..	6	
36	Bhadravtar ..	..	22,081	9	..	50	..	..	..	104	32	32	..	..	..	..	5	
37	Champdani ..	..	24,652	10	..	..	..	..	..	33	25	29	..	..	..	..	..

No.	Districts and towns.	All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.									
				Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injury.	All other causes.	For the year.	From all causes.	Mean of previous five years.
TOWNS.													
1	Burdwan	202	574	.1	.2	..	..	3.2	3.6	.3	5.8	16.6	21.1
2	Kaina	66	286	.6	.7	..	..	3.1	3.7	.3	7.8	33.9	34.8
3	Katwa	11	80	1.2	..	.4	..	1.1	2.9	.4	1.6	11.7	13.8
4	Dainhat	7	55	1.4	..	.4	..	4.3	2.1	.8	1.4	11.3	20.4
5	Raniganj	172	368	.7	..	.04	..	5.8	4.9	.3	11.8	25.3	19.8
6	Asansol	271	378	.8	..	..	..	1.7	1.1	.3	10.2	14.3	12.6
7	Suri	..	20	..	..	..	..	..	..	..	..	..	..
Birbhum district.													
8	Bankura	156	327	..	..	..	..	1.6	1.6	.2	6.1	12.9	11.4
9	Bishnupur	93	486	1.1	..	..	..	2.7	3.9	.2	4.8	25.0	18.3
10	Sonamukhi	116	360	.9	2.6	..	..	3.5	5.3	.2	10.9	33.8	20.9
Bankura district.													
11	Midnapur	133	413	..	..	..	..	2.3	3.3	.3	4.6	14.3	13.1
12	Ghatal	72	227	.4	..	..	..	4.5	4.4	.9	6.7	21.2	21.1
13	Kharar	37	106	..	..	..	..	3.3	3.5	.1	5.6	16.1	21.7
14	Chandrakona	41	153	..	..	..	..	6.0	2.5	.5	6.3	23.6	32.8
15	Ramjibpur	23	189	..	..	..	..	4.6	7.2	1.3	3.4	28.2	23.9
16	Khirpali	1	100	..	..	..	..	6.1	5.3	..	26.6	27.1	27.1
17	Tamiuk	39	101	2.3	..	..	..	1.4	1.4	.1	4.7	12.1	16.4
Hooghly district.													
18	Hooghly-Chinsura	302	786	..	..	..	..	6.1	2.6	.8	10.1	26.2	29.7
19	Bansberia	9	126	3.1	..	..	..	10.5	8	3.1	1.4	19.7	28.3
20	Arambagh	42	176	2.2	..	..	..	7.2	2.3	4.8	5.3	22.4	21.6
21	Serampur	116	423	2.9	..	..	..	2.3	2.4	2.5	3.5	12.7	17.9
22	Rishra-Konnagar	86	256	1.2	..	..	..	1.9	1.2	1.5	2.2	11.0	14.4
23	Uttarpara	39	143	1.8	..	..	..	3.3	3.3	2.2	4.5	16.5	12.9
24	Kotrung	24	98	2.6	..	..	..	1.6	2.8	2.9	3.5	17.1	22.1
25	Baidyabati	80	214	..	..	..	..	1.8	1.8	1.8	4.8	13.0	18.2
26	Bhadreswar	120	353	..	..	..	..	3.6	3.6	1.4	5.4	16.0	11.6
27	Champdani	105	207	..	..	..	..	4.7	4.7	1.2	4.3	2.2	8.4

1	2	3	4	5	6	7	8	9	10
No.	Districts and towns.	Population according to Census of 1921.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injury.
TOWNS.									
28	Howrah	195,301	294	325	..	639	962	1,805	
29	Bally	23,209	37	3	..	93	69	21	
24-Parganas district.									
30	South Suburban	33,345	80	15	..	162	92	7	
31	Tollyganj	21,637	11	3	..	94	72	15	
32	Budge-Budge	25,723	63	1	..	160	104	15	
33	Baranagar	32,084	90	8	..	109	152	19	
34	Kamarhati	23,018	32	11	..	86	63	2	
35	Rajpur	11,412	12	3	..	42	27	..	
36	Baruipur	5,114	5	2	..	12	5	..	
37	Jaynagar	8,408	11	..	..	48	38	6	
38	North Dum-Dum	4,369	9	..	..	5	31	2	
39	South Dum-Dum	14,030	10	20	..	35	28	10	
40	Khardah	5,486	1	..	..	1	1	2	
41	Barrackpur	22,460	4	..	..	37	5	..	
42	Panihati	10,161	19	13	..	16	20	..	
43	North Barrackpur	15,433	5	..	..	43	27	2	
44	Titagarh	52,451	3	..	..	109	19	1	
45	Garnila	13,096	5	16	..	43	8	19	
46	Naihati	23,286	13	35	..	34	13	3	
47	Halisahar	7,318	11	..	..	38	5	3	
48	Kanchrapara	10,332	..	3	..	106	18	4	
49	Bhatpara	65,609	35	38	..	409	69	18	
50	Barasat	8,211	10	4	..	44	3	3	
51	Gobardanga	5,112	..	..	..	26	9	1	
52	Basirhat	19,267	30	..	..	128	50	19	
53	Baduria	14,057	5	4	..	85	29	3	
54	Taki	5,200	1	..	..	38	17	6	
55	Dum-Dum	3,855	..	..	..	2	11	..	
City of Calcutta.									
56	Calcutta	1,077,264	..	1,755	1,818	..	3,481	34	26
					3,188	..	9,355	23	730

No.	Districts and towns.	Population according to Census of 1921.	Injury.									
			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Suicide.	Wounds or accidents.	Snake-bite or killed by wild beasts.	Rabies.	Total.
TOWNS.												
57	Krishnagar	22,309	4	..	2	..	130	33	28	2	1	6
58	Nabadwip	15,584	38	..	3	..	74	56	21	..	3	6
59	Ranaghat	9,652	..	..	1	..	60	12	18	..	..	..
60	Birnagar	2,305	..	..	3	..	25	..	..	1	1	2
61	Santipur	24,792	..	..	28	..	260	80	83	..	1	14
62	Chakdaha	5,216	..	..	..	..	61	..	4	..	1	5
63	Kushtia	7,849	..	..	5	..	51	..	16	..	1	2
64	Kumarkhali	3,763	..	..	4	..	35	14	10	..	1	2
65	Meherpur	5,398	..	..	2	..	45	3	16	..	2	2
Murshidabad district.												
66	Berhampur	26,670	..	..	41	..	..	321	58	97	1	9
67	Murshidabad	10,669	..	..	..	..	147	9	31	..	2	6
68	Jiaganj-Azimganj	11,231	..	..	10	..	38	19	41	..	5	2
69	Kandi	11,787	..	..	..	..	72	17	16	..	4	7
70	Jangipur	10,739	..	..	36	..	99	5	22	..	3	1
71	Dhuliaj	8,435	..	..	3	..	164	3	3	..	1	1
Jessore district.												
72	Jessore	10,139	..	..	3	..	..	..	..	..	..	..
73	Kotchandpur	7,545	..	..	4	..	50	9	18	..	1	1
74	Mahepur	3,611	..	..	5	..	44	5	3	..	..	..
Khulna district.												
75	Khulna	16,049	..	..	18	..	..	..	..	..	..	..
76	Satkhira	10,299	..	..	2	..	107	16	23	..	5	5
77	Debhata	5,570	..	..	12	..	74	8	31	..	4	1
Rajshahi district.												
78	Rajshahi	24,598	2	138	50	48	..	9
79	Nator	9	..	77	6	33	..	1	4
Dinajpur district.												
80	Dinajpur	5	..	48	7	44	..	2	2

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Ratio of deaths per 1,000 of population.

No.	Districts and towns.	All other causes.	Total deaths from all causes.	From all causes.						Mean of previous five years.				
				Small-pox.	Cholera.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injury.					
TOWNS.														
Nadia district.														
57	Krishnagar	..	47	248	..	..	5.8	1.5	.3	11.1		
58	Nabadwip	..	77	274	2.4	.1	4.7	3.5	2.1	12.7				
59	Ranaghat	..	24	117	3	..	6.2	1.2	4.9	22.3				
60	Birnagar	..	27	62	4	..	10.8	1.4	2.5	17.0				
61	Santipur	..	185	653	.1	1.1	10.5	3.2	11.7	12.1				
62	Chakdaha	..	..	67	..	..	11.7	3.3	7.5	27.3
63	Kushtia	..	20	123	..	.8	..	..	..	28.3	
64	Kumarkhali	..	9	74	1.1	.6	6.5	2.0	2.5	23.2				
65	Meherpur	..	34	102	.4	..	9.3	2.6	6.6	14.8				
Murshidabad district.														
66	Berhampur	..	102	634	1.5	.1	..	12.0	2.1	3.6				
67	Murshidabad	..	6	195	..	..	13.8	..	..	23.2
68	Jiaganj-Azimganj	..	111	226	.9	.1	3.4	1.7	3.6	23.4				
69	Kandi	..	52	185	3.0	..	6.1	1.5	5.5	23.1				
70	Jangipur	..	7	143	.3	..	9.2	5.5	4.4	20.5				
71	Dhulian	..	5	178	.2	..	19.4	2.0	6.6	15.7				
Jessore district.														
72	Jessore	..	57	142	.3	.1	..	4.9	.9	4.4				
73	Kotchandpur	..	9	111	.5	..	11.8	.7	1.8	14.0				
74	Mahepur	..	22	96	1.4	..	12.2	4.1	1.2	14.7				
Khulna district.														
75	Khulna	..	42	219	1.1	..	..	6.7	1.0	2.6		
76	Satkhira	..	56	191	.2	..	7.2	2.2	3.0	18.5				
77	Debhatta	..	2	69	2.1	..	6.8	1.4	.7	12.4				
Rajshahi district.														
78	Rajshahi	..	155	403	..	..	..	5.6	1.9	6.3	
79	Nator	..	45	174	1.1	..	..	9.6	4.1	5.6		
Dinajpur district.														
80	Dinajpur	..	42	151	.3	..	..	2.7	.3	8.4		

No.	Districts and towns.	Population according to Census of 1921.	Injury.												
			3	4	5	6	7	8	9	10	Respiratory diseases.	Dysentery and diarrhoea.	Plague.	Fever.	Small-pox.	Cholera.
TOWNS.															
81	Jalpaiguri	14,520	1	..	..	84	27	57	..	..	5	2	..	7	
82	Darjeeling	22,258	..	1	..	134	15	114	..	1	..	3	..	9	
83	Kurseong	6,445	..	..	..	117	7	36	..	..	3	..	..	3	
84	Rangpur	19,076	11	..	3	66	34	25	..	1	..	1	..	4	
85	Gaibandha	6,056	1	..	..	24	7	4	..	..	2	..	..	2	
86	Bogra	12,322	1	..	7	37	7	9	..	..	2	..	..	2	
87	Sherpur	3,984	..	..	..	38	6	15	..	..	2	..	..	2	
88	Pabna	19,343	22	5	..	68	3	18	..	..	..	12	..	1	67
89	Sirajganj	25,518	11	6	..	190	15	27	..	1	..	53	..	1	
90	Malda	14,057	24	..	..	166	28	51	..	1	..	6	..	11	
91	English Bazar	3,145	5	..	..	77	11	22	..	..	..	3	..	..
92	Old Malda	12,633	26	..	..	164	51	15	..	..	5	..	..	..	6
93	Dacca	119,450	189	..	..	318	441	967	6	4	108	..	1	119	
94	Narayanganj	30,602	34	..	..	225	102	33	2	12	..	..	..	17	
95	Mymensingh	25,287	9	..	..	201	35	18	..	..	11	..	..	12	
96	Muktagacha	6,770	8	..	..	7	2	51	..	..	..	15	..	..
97	Netrakona	8,687	10	..	..	..	4	16	..	..	..	..	..	..	16

Ratio of deaths per 1,000 of population.

No.	Districts, and towns.	All other causes.	Total deaths from all causes.	TOWNS.						From all causes.	Mean of previous five years.	
				Cholera	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injury.	All other causes.	
Jalpaiguri district.												
81	Jalpaiguri	..	64	240	.1	..	..	5.8	4.0	.5	4.4	16.5
Darjeeling district.												
82	Darjeeling	..	206	479	..	..	.04	..	6.0	.4	9.2	21.5
83	Kurseong	..	81	244	..	..	..	18.1	1.0	.5	12.6	37.9
Rangpur district.												
84	Rangpur	..	103	246	.6	..	.2	..	3.5	1.3	.2	5.4
85	Gaibandha	..	9	47	.2	..	..	4.0	1.1	.7	.3	1.5
Bogra district.												
86	Bogra	..	32	93	.1	..	.6	..	3.0	.6	.7	7.5
87	Sherpur	..	6	67	..	..	..	..	9.5	1.4	..	2.6
Pabna district.												
88	Pabna	..	54	170	1.1	..	.3	..	3.5	.9	.1	2.8
89	Sirajganj	..	80	396	.4	..	.2	..	7.4	1.0	.6	3.1
Malda district.												
90	English Bazar	..	74	354	1.7	..	..	..	11.8	1.9	3.6	5.3
91	Old Malda	..	11	126	1.6	..	..	..	24.5	3.5	7.0	3.5
92	Nawabganj	..	89	351	2.1	..	..	..	13.0	4.0	1.2	..
Dacca district.												
93	Dacca	..	1,119	3,302	1.6	..	1.2	..	2.7	3.6	8.1	9.4
94	Narayanganj	..	466	890	1.1	..	.4	..	7.3	3.3	1.1	15.2
Mymensingh district.												
95	Mymensingh	..	113	396	.3	..	..	..	7.9	1.4	.7	4.5
96	Muktagacha	..	32	55	1.2	..	.4	..	1.0	1.0	.3	4.7
97	Netrakona	..	45	142	1.1	..	..	..	5.9	1.8	.5	5.2

No.	Districts and towns.	Population according to Census of 1921.	Injury.			Respiratory diseases.			Suicide.			Snake-bite or killed by wild beasts.			Rabies.			Total.		
			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
TOWNS.																				
98	Jamalpur	23,113	29	..	2	..	109	9	22	..	..	3	..	..	14	..	..	..	..
99	Sherpur	17,813	4	..	7	..	79	30	17	..	..	5	..	..	5	..	..	..	..
100	Kishoreganj	19,518	..	..	4	..	36	45	19	..	..	6	..	..	8	..	..	..	..
101	Bajitpur	11,568	..	..	3	..	22	20	7	..	..	1	..	..	1	..	..	..	..
102	Tangail	14,305	..	..	5	..	98	16	34	..	..	..	..	..	..	..	..	..	..
103	Gauripur	7,420	..	..	13	..	13	5	4	..	..	2	..	..	2	..	..	..	..
Faridpur district.																				
104	Faridpur	14,503	23	..	2	..	120	22	19	..	..	5	..	..	5	..	..	..	..
105	Madaripur	25,297	63	..	7	..	85	33	24	..	..	5	..	..	6	..	..	..	..
106	Rajbari	7,275	..	..	..	..	106	18	30	..	..	1	..	..	2	..	..	..	..
Bakarganj district.																				
107	Barisal	26,744	61	..	9	..	177	61	32	..	..	1	..	..	3	..	..	..	..
108	Jhalakati	5,955	11	..	1	..	12	4	3	..	..	1	..	..	1	..	..	..	..
109	Nalchiti	1,858	..	..	22	..	10	1	6	..	..	1	..	..	1	..	..	..	..
110	Piroipur	13,841	..	..	7	..	46	14	5	..	..	10	..	..	11	..	..	..	..
111	Patuakhali	6,984	..	..	4	..	7	1	2	..	..	4	..	..	5	..	..	..	..
112	Bhola	4,525	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	..
Chittagong district.																				
113	Chittagong	36,030	51	..	..	..	135	45	50	..	..	5	..	..	6	..	..	..	..
114	Cox's Bazar	4,632	..	..	..	..	29	2	1	..	..	3	..	..	10	..	..	..	..
Noakhali district.																				
115	Noakhali	7,715	25	..	2	..	30	33	8	..	..	..	..	..	10	..	..	..	..
Tippera district.																				
116	Comilla	25,914	25	..	..	..	35	16	4	..	..	1	..	..	..	..	..	..	..
117	Brahmanbaria	23,414	39	..	2	..	132	29	25	..	..	1	..	..	1	..	..	..	..
118	Chandpur	15,118	19	..	4	..	24	51	9	..	..	1	..	..	3	..	..	..	..
Total of Towns																				
		3,111,257	3,837	..	3,150	..	14,175	7,739	15,845	83	..	90	1,354	92	47	1,666				
Total for the Bengal Presidency.																				
		6,522,293	54,963	..	11,268	..	705.066	39,367	56,082	1,218	..	1,617	11,772	4,210	580	47	1,666	19,397		

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Ratio of deaths per 1,000 of population.

No.	Districts and towns.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injury.	All other causes.	For the year.	From all causes.	Mean of previous five years.
98	Mymensingh district.													
99	Jamalpur	..	276	1.2	..	..	4.7	.4	.9	.6	4.0	11.9	16.2	
100	Sherpur	..	243	.2	..	.1	4.4	1.6	.9	.3	5.9	13.6	19.5	
101	Kishoreganj	..	106	30	..	..	1.8	2.3	1.0	.4	1.5	7.4	10.8	
102	Bajitpur	..	145	47	..	..	1.9	1.7	1.1	.1	4.1	9.0	11.7	
103	Tangail	..	104	75	..	..	6.8	1.1	2.4	..	5.2	16.1	14.5	
	Gauripur	..	231	3	..	..	1.7	.6	.5	.3	4.4	5.5	..	
			41	41	..	.1	1.7	.6						
104	Faridpur district.													
105	Faridpur	..	53	244	1.6	..	..	8.3	1.5	1.3	.3	3.6	16.8	15.2
106	Madaripur	..	88	306	2.5	..	..	3.4	1.3	1.3	.2	3.5	12.1	14.5
	Rajbari	..	21	184	1.0	..	..	14.6	2.5	4.1	.3	2.9	25.3	20.6
107	Bakarganj district.													
108	Barisal	..	54	397	2.3	..	..	6.6	2.3	1.2	.1	2.0	14.8	16.1
109	Jhalakati	..	13	45	1.8	..	..	2.0	.6	.5	.2	2.2	7.5	13.8
110	Nalchiti	..	3	23	.5	..	..	5.4	.5	3.2	.5	1.6	12.4	12.4
111	Pirojpur	..	48	146	1.6	..	..	3.3	1.0	.4	.8	3.5	10.5	10.8
112	Patuakhali	..	21	42	1.0	..	..	1.0	.1	.1	.7	3.0	6.0	13.2
	Bhola	..	17	31	.9	..	..	1.4	.4	.4	.4	3.7	6.8	6.4
113	Chittagong district.													
114	Chittagong	..	354	641	1.4	..	..	3.7	1.2	.4	.2	9.8	17.8	17.7
	Cox's Bazar	..	19	54	..	..	..	6.3	.4	.4	.6	4.1	11.7	15.1
115	Noakhali district.													
	Noakhali	..	54	162	3.2	..	..	3.9	4.3	1.0	1.3	7.0	21.0	12.2
116	Tippera district.													
117	Comilla	..	81	161	1.0	..	..	1.3	.6	.1	..	3.1	6.2	6.4
118	Brahmanbaria	..	155	383	1.7	..	.1	5.6	1.2	1.1	.04	6.6	16.3	18.9
	Chandpur	..	58	168	1.2	..	.3	1.6	.3	.6	.2	3.8	11.1	10.8
	Total of Towns ..		21,552	67,964	1.2	1.0	..	4.5	2.5	5.1	.5	6.9	21.8	24.5
	Total for the Bengal Presidency.		158,113	1,044,256	1.2	.2	..	15.1	.8	1.2	.4	3.4	22.4	24.8

Supplementary Annual Form No. VI (A).—Deaths registered from Different Causes in the districts and towns of the Bengal Presidency during the year 1930.

No.	Districts and towns.	Malaria.			Enteric fever.			Measles.			Relapsing fever.			Kala-azar.			Other fevers.			Dysentery.			9					
		Deaths.	Ratio.	Deaths.	Deaths.	Ratio.	Deaths.	Deaths.	Ratio.	Deaths.	Deaths.	Ratio.	Deaths.	Deaths.	Ratio.	Deaths.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.				
DISTRICTS (EXCLUDING TOWNS).																												
Burdwan Division.																												
1	Burdwan	10,562	7.9	138	'1	175	'1	22	.02	127	'1	'1	12,065	9.0	352	'.3	236	'.3	308	'.3	1,316	'.5	289	'.3	453	'.6		
2	Birbhum	7,763	9.2	283	'3	101	'1	78	.05	55	'1	'02	9,756	11.6	236	'.3	7,073	'3	1,126	'5	1,289	'3	1,316	'5	1,289	'3		
3	Bankura	8,672	9.0	69	'1	25	'02	50	.05	148	'1	'05	7,073	7.3	308	'3	63	'1	16,815	6.5	1,126	'4	3,851	'3	3,287	'4		
4	Midnapur	14,795	5.7	297	'1	138	'05	88	.1	139	'1	'1	3,851	4.3	1,289	'3	63	'1	3,851	'4	1,289	'3	1,289	'3	1,289	'3		
5	Hooghly	6,764	7.5	651	'7	63	'1	198	.2	112	'1	'1	1,287	4.2	1,287	'4	91	'1	1,287	'4	1,287	'4	1,287	'4	1,287	'4		
6	Howrah	2,077	2.7	301	'4	49	'1	198	.2	91	'1	'1	12,065	9.0	352	'.3	9,756	11.6	236	'.3	7,073	'3	1,126	'5	289	'.3	453	'.6
Presidency Division.																												
7	24-Parganas	4,621	2.3	491	'2	76	'04	395	.2	937	'2	'5	14,146	7.1	709	'.3	5,670	'1	448	'.3	7,737	'6.5	1,126	'4	6,496	'4.6		
8	Nadia	30,517	21.9	99	'1	71	'05	232	.2	334	'2	'05	14,146	7.1	709	'.3	60	'2	430	'2	194	'2	3,911	'3	3,911	'3		
9	Murshidabad	21,507	18.2	150	'1	59	'05	46	.04	46	'1	'05	5,670	4.1	448	'.3	120	'1	6,092	'3	430	'2	1,235	'4	1,235	'4		
10	Jessore	30,607	18.0	310	'2	53	'03	112	.1	112	'1	'05	7,737	6.5	1,126	'4	291	'2	6,496	'4	1,126	'4	3,911	'3	3,911	'3		
11	Khulna	9,670	6.8	541	'4	35	'02	108	.1	108	'1	'04	14,017	8.3	257	'.1	132	'1	2,349	'9.2	916	'4	21,235	'8.5	21,235	'8.5		
Rajshahi Division.																												
12	Rajshahi	32,613	22.4	340	'2	54	'04	7	.004	267	'2	'2	5,083	3.5	285	'.2	171	'1	1,010	'1	1,010	'1	1,010	'1	1,010	'1		
13	Dinajpur	25,848	15.3	1,070	'6	200	'1	171	.1	171	'1	'05	4,680	5.1	854	'.9	120	'1	1,235	'8.5	2,349	'9.2	2,349	'9.2	2,349	'9.2		
14	Jalpaiguri	9,747	10.6	76	'1	91	'1	47	.05	47	'1	'05	2,349	9.2	346	'1.4	132	'1	607	'2	1,235	'8.5	916	'4	5,944	'5.8		
15	Darjeeling	2,641	10.4	80	'3	21	'1	22	.1	22	'1	'05	21,235	10.4	1,126	'4	580	'2	261	'1	7,545	'5.6	200	'2	2,349	'8.5		
16	Rangpur	21,341	8.6	1,290	'5	267	'1	580	.02	41	'1	'04	2,349	9.2	346	'1.4	25	'02	41	'04	204	'1	2,349	'9.2	2,349	'9.2		
17	Bogra	9,318	9.0	22	'02	25	'02	41	.02	25	'1	'04	1,235	2.5	666	'3	188	'1	31	'02	54	'04	235	'2	2,349	'8.5		
18	Pabna	20,958	15.6	188	'1	31	'02	31	.03	31	'1	'04	5,944	5.8	1,126	'4	107	'1	25	'03	34	'04	235	'2	2,349	'8.5		
19	Malda	23,913	25.0	107	'1	25	'03	25	.03	25	'1	'04	1,235	2.5	666	'3	107	'1	31	'03	34	'04	235	'2	2,349	'8.5		
Dacca Division.																												
20	Dacca	7,935	2.7	773	'3	188	'1	462	.1	752	'2	'2	26,244	8.8	2,980	'1.0	785	'2	1,115	'9.4	44,115	'9.4	1,115	'9.4	26,733	'7.8		
21	Mymensingh	6,910	1.5	402	'1	262	'05	227	.04	706	'1	'04	17,157	7.8	1,354	'1.3	103	'04	26,733	'10.4	1,503	'7	1,503	'7	1,503	'7		
22	Faridpur	17,920	8.1	450	'2	246	'1	263	.04	106	'1	'04	1,115	2.5	666	'3	1,115	'2	1,115	'3	1,115	'3	1,115	'3	1,115	'3		
23	Bakarganj	122	'04	170	'1	4	'01	106	.04	106	'1	'04	1,115	2.5	666	'3	103	'04	1,115	'2	1,115	'3	1,115	'3	1,115	'3		
Chittagong Division.																												
24	Chittagong	1,295	'8	349	'2	84	'05	309	.2	223	'1	'1	25,534	16.2	271	'2	511	'3	15,048	'10.3	1,398	'9	1,398	'9	1,398	'9		
25	Noakhali	2,029	1.4	553	'4	235	'2	336	.2	607	'2	'04	1,590	2.5	666	'3	1,590	'2	1,590	'3	18,673	'7.0	1,356	'5	1,356	'5		
26	Tipperra	3,553	1.3	722	'3	125	'04	4743	.1	4,743	'2	'04	10,099	'1	10,099	'2	2,703	'1	329,726	'7.6	17,786	'4	17,786	'4	17,786	'4		

No.	Districts and towns.	10			11			12			13			14			15			16			17			
		Deaths.	Ratio.	Diarrhoea.	Deaths.	Ratio.	Influenza.	Deaths.	Ratio.	Pneumonia.	Deaths.	Ratio.	Phthisis.	Deaths.	Ratio.	Other respiratory diseases.	Deaths from child-birth.*	Deaths under one year.	Male.	Female.	Total.	Male.	Female.	Total.	Infant mortality rate.	
DISTRICTS (EXCLUDING TOWNS).																										
Burdwan Division.																										
1	Burdwan	737	.5		78	.1		1,091	.8		346	.2		462	.3		198	4,062	3,509	7,571	215.1	202.5	202.5			
2	Birbhum	218	.3		117	.1		1,570	.7		242	.3		683	.8		196	3,693	3,347	7,040	191.4	179.0	179.0			
3	Bankura	919	.9		170	.1		1,017	1.0		356	.4		505	.5		196	3,108	2,658	5,766	183.4	166.9	166.9			
4	Midnapur	1,483	.6		139	.05		2,134	1.8		626	.2		633	.2		553	2,203	1,851	6,239	13,019	12,019	12,019			
5	Hooghly	892	1.0		68	.1		1,750	1.9		410	.4		435	.5		154	1,785	1,487	4,054	1,487	1,487	1,487			
6	Howrah	1,654	2.1		115	.1		1,674	.9		510	.6		523	.7		87									
Presidency Division.																										
7	24-Parganas.	662	.3		310	.1		1,473	.7		571	.3		646	.3		290	4,403	3,612	8,015	145.8	126.4	126.4			
8	Nadia	149	.1		36	.02		1,777	.5		251	.2		255	.2		205	5,134	4,420	9,554	202.1	189.0	189.0			
9	Murshidabad	71	.1		66	.1		339	.3		99	.1		291	.2		342	3,592	3,267	6,859	206.1	189.0	189.0			
10	Jessore	243	.1		39	.02		862	.5		232	.2		320	.2		338	3,936	3,064	7,000						
11	Khulna	300	.2		43	.03		521	.4																	
Rajshahi Division.																										
12	Rajshahi	133	.1		18	.01		142	.1		72	.1		142	.1		77	261	259	5,040	4,747	9,787	9,787			
13	Dinajpur	267	.2		109	.1		989	.6		291	.3		2,239	.2		690	708	3,016	5,790	5,041	10,831	10,831			
14	Jaiparguri	848	.9		42	.6		1,47	.6		42	.2		280	1.1		301	1.2	876	2,742	7,758	5,758				
15	Darjeeling	147	.6		795	.3		795	.3		147	.1		712	.3		388	1.2	667	7,274	7,775	1,651				
16	Rangpur	191	.2		17	.02		191	.2		17	.02		139	.1		117	1.1	140	2,793	6,125	13,399				
17	Bogra	144	.1		10	.01		326	.2		10	.01		87	.02		203	1.1	303	3,703	2,423	5,216				
18	Pabna	46	.04		22	.02		87	.1		22	.02		53	.05		39	.04	99	2,754	7,109	231.4				
19	Malda	..	..		..	..		..	..		..	..		..	..		..	..	..	..	..	..	..	200.8	
Dacca Division.																										
20	Dacca	1,056	.3		97	.03		553	.2		515	.1		357	.2		507	.2	892	3	699	7,618	6,606	14,224		
21	Mymensingh	635	.1		112	.02		667	.3		52	.02		832	.4		141	.05	486	.1	637	10,713	9,135	19,848		
22	Faridpur	..	..		200	.1		..	..		..	..		..	..		..	..	950	.4	476	6,075	5,123	11,198	
23	Bakarganj	..	..		..	..		..	..		..	..		..	..		..	..	136	.05	198	5,962	5,055	11,017	
Chittagong Division.																										
24	Chittagong	173	.1		85	.05		215	.1		122	.05		386	.4		78	.05	606	.4	246	3,326	2,949	6,275		
25	Noakhali	611	.4		176	.1		610	.3		176	.1		366	.1		231	.1	578	.2	310	4,340	3,873	7,982		
26	Tipperra	601	.2		..	..		..	..		..	..		..	..		..	..	..	..	..	..	..	128.7	
Total of Districts		13,842	.3		2,653	.1		19,107	.4		7,961	.2		8,983	.2		10,516	.2	117,137	101,932	219,069	186.5				

* Deaths during or within 14 days of labour.

No.	Districts and towns.	Malaria.			Enteric fever.			Relapsing fever.			Measles.			Kala-azar.			Other fevers.			Dysentery.			
		Deaths.	Ratio.		Deaths.	Ratio.		Deaths.	Ratio.		Deaths.	Ratio.		Deaths.	Ratio.		Deaths.	Ratio.		Deaths.	Ratio.		
TOWNS.																							
Burdwan District.																							
1	Burdwan	74	2.1		13	.4		1	.03		15	.4		9	.3		50	1.4		20	2.4		
2	Kalna	22	2.6		..	.1		..	1		26	3.1		99	11.7		7	1.0		3	.5		
3	Katwa	5	.7		..	..		..	..		..	..		24	.2		3	.6		3	.6	
4	Dainhat	19	3.9		..	.1		..	..		..	..		72	.4		18	1.2		4	.9	
5	Raniganj	10	.7		2	.1		..	..		..	..		39	1.5		5	1.2		1.5	.5	
6	Asansol	1	.04		..	..		..	..		..	..		..	..		..	..		..	..
7	Suri	15	1.7		1	.1		..	..		2	.2		..	..		50	5.6		5	.6	
Bankura District.																							
8	Bankura	9	.3		..	..		3	.1		..	..		2	.1		62	2.4		17	.7	
9	Vishnupur	129	6.6		..	..		..	..		..	..		36	1.9		5	3		8	.7	
10	Sonamukhi	63	5.9		..	..		..	..		..	..		41	3.8		..	..		..	..
Midnapur District.																							
11	Midnapur	5	.2		..	..		..	..		..	..		..	..		97	3.3		31	1.1	
12	Ghatal	3	.3		..	..		..	..		..	..		..	..		46	4.3		3	.3	
13	Kharar	6	.9		..	..		..	..		..	..		15	2.3		..	..		3	.5	
14	Chandrakona	9	1.4		..	..		3	.4		..	..		17	2.6		6	.6		4	.6	
15	Ramjibanpur	21	3.1		..	..		..	..		..	..		6	.9		..	..		23	6.1	
16	Khirpai	..	..		1	.1		..	..		..	..		..	..		17	2.0		..	..
17	Tamluk	..	..		..	..		..	..		..	..		..	..		..	..		..	..
Hooghly District.																							
18	Hooghly-Chinsura	15	.5		30	1.0		4	.1		..	..		6	.2		128	4.3		35	1.2	
19	Bansberia	14	2.2		1	.2		..	..		3	.4		..	..		52	8.1		3	.5	
20	Arambagh	45	5.7		..	..		13	.4		1	.03		..	..		8	.8		6	.8	
21	Serampur	6	.2		..	..		..	..		..	..		13	2.0		15	1.6		40	1.2	
22	Rishra-Konnagar	3	.1		..	..		..	..		..	..		..	..		17	2.6		8	.3	
23	Uttarpara	5	.6		..	..		..	..		..	..		6	.9		19	2.2		25	.9	
24	Kotrung	1	.1		..	..		..	..		..	..		..	..		18	2.6		3	.4	
25	Baidyabati	3	.2		..	..		..	..		..	..		..	..		54	3.3		7	.3	
26	Bhadrabewar	12	.5		..	..		1	.04		6	.1		..	..		82	3.7		7	.5	
27	Champdani	2	.1		..	..		..	..		..	..		..	..		28	1.1		12	.5	

No.	Districts and towns.	Diarrhoea.			Influenza.			Pneumonia.			Phthisis.			Other respiratory diseases.			Deaths from child-birth.*			Deaths under one year.			Infant mortality rate.						
		Deaths.	Ratio.	Deaths.	Deaths.	Ratio.	Deaths.	Deaths.	Ratio.	Deaths.	Deaths.	Ratio.	Deaths.	Deaths.	Ratio.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.					
TOWNS.																													
1	Burdwan District.	61	1.8	..	..	..	76	2.2	20	..	..	..	30	.9	..	2	19	16	29	122.3	372.5	38	1.3	1.2	1.3			
2	Burdwan	6	.7	..	..	..	15	1.8	7	.8	8	1.2	9	1.1	..	..	3	3	6	6	89.5	218.2	12	1.6	1.6	1.6		
3	Kalna	1	.1	..	..	..	1	.7	7	1.0	3	1.6	4	1.8	..	..	6	6	12	12	194.3	194.3	55	1.5	1.5	1.5		
4	Katwa	1	.2	..	..	..	2	.4	3	1.0	14	1.6	1	2.3	..	..	9	9	25	25	49	49	132.1	132.1	21	1.4	1.4	1.4
5	Dainhat	1	.5	..	..	..	23	1.6	14	1.0	11	1.0	1	2.2	..	..	4	4	28	28	30	30	55	55	21	1.4	1.4	1.4
6	Raniganj	1	.04	..	..	..	24	1.9	11	1.0	5	1.0	1	2.2	..	..	5	5	21	21	49	49	132.1	132.1	21	1.4	1.4	1.4
7	Birbhum District.	7	Suri	..	..	..	1	.1	1	.1	19	2.1	8	.9	..	..	5	5	1	12	7	19	141.8	141.8	19	1.4	1.4	1.4
8	Bankura District.	23	Bankura	..	..	..	9	2.4	..	..	25	1.0	4	.2	..	..	12	12	6	27	25	52	131.0	131.0	52	1.4	1.4	1.4
9	Fishnupur	47	..	..	..	..	2.8	2.8	..	..	39	2.0	2	.1	..	..	34	34	10	30	30	60	204.7	204.7	60	1.4	1.4	1.4
10	Sonamukhi	30	..	..	..	..	..	..	..	31	2.9	4	.4	..	..	22	22	3	21	21	42	223.4	223.4	63	1.4	1.4	1.4	
11	Midnapur District.	34	Midnapur	..	..	..	1.2	1.2	1	.03	54	1.9	13	.4	..	..	27	9	..	13	13	26	49.3	49.3	13	1.4	1.4	1.4
12	Ghatail	44	Ghatail	..	..	..	4.1	4.1	..	..	31	2.9	3	.3	..	..	8	7	..	25	25	38	85.4	85.4	12	1.4	1.4	1.4
13	Kharar	23	Kharar	..	..	..	3.5	3.5	..	..	11	1.7	4	.6	..	..	8	8	4	8	8	12	133.3	133.3	12	1.4	1.4	1.4
14	Chandrakona	13	..	..	..	2.0	2.0	..	..	37	5.7	..	..	..	..	..	14	2.2	6	12	12	23	200.0	200.0	11	1.4	1.4	1.4
15	Ramjibpur	44	..	..	..	6.6	6.6	..	..	34	5.1	..	..	..	..	..	28	4.2	8	8	8	11	175.9	175.9	19	1.4	1.4	1.4
16	Khirpali	20	..	..	..	5.3	5.3	..	..	40	6.0	2	.5	..	..	9	5	4	5	5	4	9	128.6	128.6	9	1.4	1.4	1.4
17	Tamluk	5	6	6	6	.7	1	.1	6	6	..	6	6	6	10	10	76.3	76.3	10	1.4	1.4	1.4
18	Hooghly-Chinsura	43	Hooghly-Chinsura	..	..	..	1.4	1.4	3	.1	61	2.0	22	.7	..	..	12	4	..	13	13	97	194.9	194.9	13	1.4	1.4	1.4
19	Bansberia	2	Bansberia	..	..	..	.3	.3	..	..	7	1.1	8	.5	..	..	5	6	3	5	5	12	160.6	160.6	12	1.4	1.4	1.4
20	Arambagh	12	Arambagh	..	..	..	1.5	1.5	..	..	30	3.8	5	.6	..	..	22	7	..	27	27	54	78.7	78.7	27	1.4	1.4	1.4
21	Serampur	41	..	..	..	1.2	1.2	..	..	1	0.4	15	.6	..	..	..	7	3	..	25	25	50	150.1	150.1	50	1.4	1.4	1.4
22	Rishra-Konnaigar	20	..	..	..	2.0	2.0	..	..	1	0.4	3	.3	..	..	..	3	3	..	6	6	8	14	14	8	1.4	1.4	1.4
23	Uttarpara	6	..	..	..	7	7	..	..	7	.8	..	..	..	..	..	7	3	..	11	11	17	35	35	17	1.4	1.4	1.4
24	Korlung	8	..	..	..	1.2	1.2	..	..	1	.1	..	..	..	..	..	2	2	..	12	12	22	140.7	140.7	22	1.4	1.4	1.4
25	Baidyabati	24	..	..	..	1.4	1.4	..	..	1	.1	..	..	..	..	..	14	.8	..	15	15	9	11	11	9	1.4	1.4	1.4
26	Bhadreswar	25	..	..	..	1.1	1.1	..	..	1	.04	13	.6	..	..	..	5	3	..	13	13	47	255.7	255.7	47	1.4	1.4	1.4
27	Champdani	13	..	..	..	5	5	..	..	5	.2	..	..	..	..	..	17	4	..	4	4	23	129.6	129.6	23	1.4	1.4	1.4

* Deaths during or within 14 days of labour.

No.	Districts and towns.	Malaria.		Enteric fever.		Measles.		Relapsing fever.		Kala-azar.		Other fevers.		Dysentery.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
28	Howrah	..	..	150	.8	13	.1	..	..	35	.2	342	1.7	623	3.2
29	Bally	..	..	10	.4	..	..	..	..	3	.1	66	2.8	12	.5
TOWNS.															
Howrah District.															
30	South Suburban	..	2.8	24	.7	1	.03	..	.1	11	.3	31	.9	36	1.1
31	Tollyganj	..	.7	8	.4	4	.2	..	2	..	..	64	2.9	26	1.2
32	Budge-Budge	..	.3	2	.1	..	.2	..	..	4	.1	147	5.7	72	1.2
33	Baranagar	..	.2	19	.6	..	..	..	..	2	.1	70	2.2	106	2.8
34	Kamarhati	..	.1	1	.04	..	..	..	..	2	.1	82	3.6	38	3.3
35	Rajpur	..	.7	7	.6	..	.8	..	..	2	.2	24	2.1	20	1.6
36	Baruipur	..	.2	2	.4	..	..	..	..	..	..	9	1.8	5	1.7
37	Jaynagar	..	.3	3	.3	..	..	..	..	..	..	39	4.6	23	1.0
38	North Dum-Dum	..	1	2	.2	..	..	..	..	..	..	14	3.2	8	2.7
39	South Dum-Dum	..	9	..	..	..	..	..	..	..	..	17	1.2	22	1.8
40	Khardah	..	..	..	..	..	..	..	..	..	..	19	3.5	1	1.6
41	Barrackpur	..	..	8	.3	..	..	..	..	..	..	24	1.1	2	1.2
42	Panihati	..	..	4	.4	..	..	..	..	..	..	11	1.1	10	1.0
43	North Barrackpur	..	..	8	.5	..	..	..	..	..	..	25	1.6	21	1.4
44	Titagarh	..	..	..	..	..	..	..	..	..	..	797	15.2	1	.02
45	Garulia	..	..	26	.0	..	..	..	..	..	..	17	1.3	5	.4
46	Naihati	..	..	..	..	..	..	..	..	..	..	31	1.3	8	.3
47	Halisahar	..	..	36	.4	9	.2	..	..	..	..	..	..	103	.1
48	Kanchrapara	..	..	..	..	..	..	..	..	..	..	365	5.6	56	.5
49	Bhatpara	..	..	17	.3	..	..	..	..	..	..	..	..	24	.4
50	Barasat	..	..	44	.5	4	.4	..	..	..	..	..	..	7	.2
51	Gobardanga	..	..	20	3.9	..	..	..	..	..	..	..	..	36	1.4
52	Basirhat	..	..	40	2.1	10	.5	..	..	..	..	..	..	21	1.9
53	Baduria	..	..	5	3	..	..	..	..	..	..	..	..	21	1.5
54	Taki	..	..	9	1.7	..	..	..	..	..	..	..	..	11	2.1
55	Dum-Dum	..	..	..	..	..	..	..	..	..	..	..	..	3	.8
City of Calcutta.															
56	Calcutta	..	..	713	.7	146	.1	..	..	315	.3	1,578	1.5	1,772	1.6
Nadia District.															
57	Krishnagar	..	..	79	3.5	3	1	47	2.1	..	..	..	29	1.3	32
58	Nabadwip	..	..	1	.1	6	.4	67	4.3	..	..	..	..	..	2.0

No.	Districts and towns.	Diarrhoea.		Influenza.		Pneumonia.		Phthisis.		Other respiratory diseases.		Deaths under one year.		Infant mortality rate.*
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Male.	Female.	Total.
TOWNS.														
28	Howrah	..	..	1.7	1.1	..	..	2.6	1	.03	..	35	1.0	1,272
29	Bally	..	..	2.5	2.2	..	..	1.8	..	41	1.6	11	27	206.2
24-Parganas District.														
30	South Suburban	..	..	2.6	1	..	..	1.4	..	47	1.6	..	60	119.3
31	Tollyganj	..	..	1.8	1.2	..	..	1.9	.2	41	.7	..	2	28.6
32	Budge-Budge	..	..	1.4	1.4	..	..	1.7	.7	17	.7	..	74	186.1
33	Baranagar	..	..	1.1	1.1	..	..	1.1	.9	28	.9	..	15	66.7
34	Kamarhati	..	..	.6	.6	..	..	1.9	.4	10	.6	..	13	22
35	Rajpur	..	..	.7	.6	..	..	2.1	.6	24	1.0	..	9	84.6
36	Baruipur	..	..	1.8	1.8	..	..	1.4	..	7	1.4	..	4	50.6
37	Jaynagar	..	..	5.3	5.3	..	..	2.1	..	21	1.1	..	18	200.0
38	North Dum-Dum	..	..	6.4	5.5	..	..	1.4	..	14	1.2	..	34	259.5
39	South Dum-Dum	..	..	3.5	3.1	..	..	1.4	..	6	1.1	..	21	109.6
40	Khardah	..	..	3.5	3.1	..	..	1.4	..	1	1.2	..	22	148.1
41	Barrackpur	..	..	1.0	1.0	..	..	1.4	..	1	1.0	..	10	20
42	Panighati	..	..	4.3	3.0	..	..	2.3	..	13	1.9	..	20	114.3
43	North Barrackpur	..	..	6.4	3.3	..	..	2.4	..	19	1.2	..	24	136.2
44	Titagarh	..	..	1.8	1.3	..	..	1.4	..	15	1.7	..	44	131.5
45	Garulia	..	..	3.2	2.2	..	..	1.5	..	20	2.0	..	19	79
46	Naihati	..	..	5.5	2.2	..	..	1.5	..	25	1.1	..	29	121.3
47	Halisahar	..	..	4.5	5.5	..	..	1.4	..	19	1.2	..	18	97.9
48	Kanchrapara	..	..	1.3	1.3	..	..	1.7	..	1	1.7	..	4	44.7
49	Bhatpara	..	..	4.5	7.7	..	..	1.6	..	41	3.6	..	65	98.2
50	Barasat	..	..	1	1	..	..	1.1	..	7	1.8	..	1	149.5
51	Gobardanga	..	..	2	4	..	..	1.4	..	21	4.1	..	2	111.1
52	Basirhat	..	..	14	7	..	..	1.6	..	80	4.1	..	51	160.7
53	Baduria	..	..	8	6	..	..	1.6	..	23	1.6	..	14	86.2
54	Taki	..	..	6	1.1	..	..	1.2	..	1	2.5	..	16	204.1
55	Dum-Dum	..	..	1	3	..	..	1	..	1	3	..	2	30.0
56	City of Calcutta.	..	..	419	4	3,491	3.2	2,547	2.4	2,898	2.7	89	3,580	2,623
57	Calcutta	..	..	1,416	1.3	..	..	1	..	1	0.4	..	10	45
58	Nadia District.	..	..	..	..	..	..	1	..	17	.8	..	23	38
	Krishnagar	..	..	..	..	..	..	1	..	9	.6	..	1	161.7
	Nabadwip	..	..	..	..	..	..	1	..	1	.5	..	1	141.5

* Deaths during or within 14 days of labour.

No.	Districts and towns	Malaria.		Enteric fever.		Measles.		Relapsing fever.		Kala-azar.		Other fevers.		Dysentery.	Ratio.
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		
TOWNS.															
59	Ranaghat	..		60	6.2	..		..		..		..		1.2
60	Birnagar	..		61	10.4	..		..		..		..		.4
61	Santipur	..		62	2.7	..		..		..		..		1.6
62	Chakdaha	..		63	11.7	..		..		..		..		1.8
63	Kushtia	..		64	2.2	..		..		..		..		2.9
64	Kumarkhali	..		65	8.8	..		..		..		..		.4
65	Meherpur	..			4.1	..		..		..		..
Murshidabad District.															
66	Berhampur	98	3.7	67	20	..		..		..		..		1.8
67	Murshidabad	2	.2	68	1.2	3	.3	..		..		..		.7
68	Jiaganj-Azimganj	13	1.2	69	..	..		..		..		..		1.5
69	Kandi	..		70	..	..		..		..		..		.3
70	Jangipur	..		71	19.4	..		..		..		..		.4
71	Dhuliaj	..			164	..		..		..		..		.3
Jessore District.															
72	Jessore	36	3.5	73	89	11.8	..	1	.1	..		2	.2	.9	
73	Kotchandpur	..		74	32	8.9	..	1	..	..		..		.3
Khulna District.															
75	Khulna	44	2.7	76	11	1.0	..	3	.2	..		..		.6
76	Satkhira	..		77	6	1.1	..	..	..	..		..		1.7
77	Debhutta	..								..		..		.5
Rajshahi District.															
78	Rajshahi	..		79	Nator	..		..		..		..		1.5
79	Nator	..			43	5.3	..	3	.1	..		..		.7
Dinajpur District.															
80	Dinajpur	..		81	Jalpaiguri	..		2	.1	..		..		.3
81	Jalpaiguri	..			56	3.9	..	..	..	..		..		22

No.	Districts and towns.	2		10		11		12		13		14		15		16		17		
		Deaths.	Ratio.																	
		TOWNS.																		
Nadia District.																				
59	Ranaghat	..	..	..	..	..	..	18	1·9	..	..	..	..	..	..	13	10	23	119·8
60	Birnagar	..	..	..	..	..	..	4	1·7	..	..	..	..	..	..	11	4	15	230·7
61	Santipur	..	..	..	..	..	..	40	1·6	..	..	..	..	..	..	31	40	71	134·7
62	Chakdaha	..	..	..	..	..	..	4	1·9	..	..	..	..	..	..	7	1	8	108·1
63	Kushtia	..	..	..	..	..	..	8	1·8	..	..	..	..	..	..	5	6	3	87·4
64	Kumarkhali	..	..	..	..	..	..	3	1·8	..	..	..	..	..	..	9	2	3	137·2
65	Meherpur	..	..	..	..	..	..	1	2·6	..	..	..	..	..	..	10	9	19	133·8
Murshidabad District.																				
66	Berhampur	9	·3	..	..	..	..	1	1·1	29	2·1	13	·5	9	46	38	18	84	181·8
67	Murshidabad	1	·1	..	..	..	..	2	1·5	16	1·5	2·2	·2	..	..	20	12	18	204·3
68	Jiaganj-Azimganj	2	·2	..	..	..	..	3	1·2	21	1·9	7	1·1	..	..	3	3	12	129·7
69	Kandi	3	·2	..	..	..	..	2	1·1	8	·7	4	·3	..	..	4	1·1	17	103·2
70	Jangipur	1	·1	..	..	..	..	1	2·4	16	1·5	5	·5	1	..	7	1	13	29
71	Dhulian	..	..	..	..	..	..	1	2·6	1	1	1	1	..	..	11	14	11	75·9
Jessore District.																				
72	Jessore	..	..	..	..	..	..	3	1·5	15	1·5	1	·1	..	..	2	2	2	31·5
73	Kotchandpur	3	·4	..	..	..	..	8	1·4	3	1·4	..	..	..	..	3	2	2	80·0
74	Maheshpur	..	..	..	..	..	..	3	1·1	4	1·1	2	·5	..	..	6	..	3	160·7
Khulna District.																				
75	Khulna	..	..	..	..	..	..	5	·4	..	..	..	..	..	..	3	·2	4	33
76	Satkhira	..	..	..	..	..	..	5	·5	..	..	..	..	..	..	4	·4	12	232·4
77	Debhata	..	..	..	..	..	..	5	·9	..	..	..	..	..	..	27	4	19	219·7
Rajshahi District.																				
78	Rajshahi	..	..	..	..	..	..	13	·5	..	..	..	..	..	..	16	·6	·7	80·9
79	Nator	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18	2·2	9	211·1
Dinajpur District.																				
80	Dinajpur	..	..	..	..	..	..	1	·05	..	..	..	..	..	..	27	1·5	3	2
Jalpaiguri District.																				
81	Jalpaiguri	..	..	..	..	..	..	5	·3	..	..	..	..	..	..	32	2·2	18	105·2
																			39·5	

* Deaths during or within 14 days of labour.

No.	Districts and towns.	Diarrhoea.				Influenza.				Pneumonia.				Phthisis.				Other respiratory diseases.				Deaths under one year.				Infant mortality rate.	17		
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Male.	Female.	Total.									
TOWNS.																													
82	Darjeeling	10	.4	2	.1	45	2.0	60	2.7	7	.3	9	51	37	88	140.8													
83	Kurseong	..	..	..	..	9	1.4	23	3.6	2	.3	..	20	21	41	160.8											
Darjeeling District.																													
84	Rangpur	8	.4	3	..	3	.2	12	.6	7	.4	8	3	6	12	18													
85	Gaibandha	2	.3	..	..	..	..	2	.3	..	..	..	..	2	..	..	..									
Rangpur District.																													
86	Bogra	1	.1	..	..	..	..	..	..	1	.1	..	..	2	.2	1	10	11	1	21	179.5						
87	Sherpur	2	62.5							
Bogra District.																													
88	Pabna	1	.05	1	.05	11	25	25	22	158.2							
89	Serajganj	16	.6	7	.3	7	.3	..	39	39	64	157.2							
Pabna District.																													
90	English Bazar	5	.3	15	1.8	8	.6	11	23	29	52	160.0							
91	Old Malda	6	1.9	12	1.9	8	.6	10	28	25	55	384.6							
92	Nawabganj	136.6	
Malda District.																													
93	Dacca	148	1.2	18	1	..	..	415	3.5	93	.8	..	..	52	3.7	439	385	125	133	258	253.2						
94	Narayanganj	16	.5	1	.03	13	.4	11	.4	8	.3	8	..	16	28	3	38	66							
Dacca District.																													
95	Mymensingh	17	.7	11	4	3	38	66							
96	Muktigacha	1	2	2	6	58.2						
97	Netrokona	6	.3	10	.4	5	.2	7	2	2	20	176.7							
98	Jamalpur	6	.3	15	.3	3	.2	6	30	30	16	125.8							
99	Sherpur	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	122.4

* Deaths during or within 14 days of labour.

No.	Districts and towns.	Malaria.				Enteric fever.				Measles.				Relapsing fever.				Kala-azar.				Other fevers.				Dysentery.			
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
TOWNS.																													
Mymensingh District.																													
100	Kishorganj	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
101	Bajitpur	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
102	Tangail	..	2	..	3	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2
103	Gauripur	..	2	..	3	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2	..	2
Faridpur District.																													
104	Faridpur	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
105	Madaripur	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
106	Rajbari	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
Bakarganj District.																													
107	Barisal	..	2	..	1	..	2	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
108	Jhalakati	..	2	..	1	..	2	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
109	Nalchiti	..	2	..	1	..	2	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
110	Pirojpur	..	2	..	1	..	2	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
111	Patuakhali	..	2	..	1	..	2	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
112	Bhola	..	2	..	1	..	2	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
Chittagong District.																													
113	Chittagong	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
114	Cox's Bazar	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
Noakhali District.																													
115	Noakhali	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
Tippera District.																													
116	Comilla	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
117	Brahmanbaria	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
118	Chandpur	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1
Total of Towns		..	3,181	..	1·02	..	1,222	..	4	..	260	..	1	..	24	..	01	..	815	..	3	..	8,673	..	2·8	..	4,466	..	1·4
Total for the Bengal Presidency		..	336,879	..	7·2	..	11,144	..	2·2	..	2,963	..	1	..	4,767	..	1	..	10,914	..	2	..	338,399	..	7·3	..	22,252	..	5·5

- * Deaths during or within 14 days of labour.

Annual Form No. VII.—Deaths registered from CHOLERA in the districts of the Bengal Presidency during each month of the year 1930.

185

No.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	August.	
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.									
Burdwan Division.														
1	Burdwan	29	28	2,817	292	295	114	184	126	88	94	65	65	65
2	Birbhum	15	14	2,302	115	257	82	45	47	14	22	25	25	25
3	Bankura	22	21	4,003	212	94	35	42	49	72	53	80	80	80
4	Midnapur	38	35	10,351	1,447	566	550	513	288	121	103	46	46	46
5	Hooghly	28	28	2,197	646	124	86	91	181	205	113	73	46	46
6	Howrah	13	13	863	306	368	244	301	402	300	133	108	45	45
Presidency Division.														
7	24-Parganas	63	57	3,427	688	946	1,075	916	728	435	172	147	88	88
8	Calcutta	1	1	1	1	101	137	262	403	432	193	116	37	37
9	Nadia	30	29	2,353	517	433	102	93	962	661	128	29	30	30
10	Murshidabad	26	25	1,974	428	394	217	148	201	226	105	99	43	43
11	Jessore	27	27	3,613	577	729	204	182	370	359	47	35	21	21
12	Khulna	25	25	2,011	372	345	102	240	308	156	52	45	23	23
Rajshahi Division.														
13	Rajshahi	26	25	4,487	231	156	40	34	104	159	30	61	61	61
14	Dinajpur	31	25	6,612	263	173	55	140	411	82	107	61	61	61
15	Jalpaiguri	18	13	722	30	9	3	4	1	1	56	30	30	30
16	Darjeeling	6	1	304	1	..	..	..	2	5	..	1	1	14
17	Rangpur	32	31	4,102	383	85	38	..	26	92	35	29	6	2
18	Bogra	14	13	2,780	99	30	9	30	72	32	69	18	5	11
19	Pabna	19	19	2,539	319	158	74	154	150	389	338	46	18	4
20	Malda	18	18	2,239	112	441	..	154	187	142	67	67	44	3
Dacca Division.														
21	Dacca	14	14	4,737	1,514	394	326	853	1,891	1,009	131	77	77	63
22	Mymensingh	60	60	7,354	1,318	760	407	242	1,165	223	84	37	37	25
23	Faridpur	17	17	3,363	960	592	190	660	1,911	1,047	189	104	104	40
24	Bakarganj	22	22	2,990	943	596	250	326	595	399	132	34	34	28
Chittagong Division.														
25	Chittagong	22	18	870	113	45	38	24	88	239	105	54	54	33
26	Noakhali	15	15	1,719	247	256	110	235	266	201	56	36	36	10
27	Tippera	23	23	4,018	1,049	859	458	633	465	167	167	182	182	50
Total for the Bengal Presidency.		654	617	84,748	13,183	9,646	5,100	6,612	10,716	7,331	2,437	1,644	921	

No.	Districts.																
		September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	Burdwan Division.	48	37	24	50	690	1,360	9	.9	.7	.7	1.2	1.2	3.2	2	3	2
2	Burdwan	9	1	5	16	600	600	7	.7	.5	.5	.9	.9	1.9	.6	.6	1.9
3	Birbhum	45	25	9	3	292	570	6	.6	1.1	1.1	1.4	1.4	2.2	1.0	1.0	2.2
4	Bankura	19	33	62	30	1,406	2,864	1.0	1.0	1.0	1.0	1.2	1.2	1.9	1.2	1.2	1.9
5	Midnapur	15	20	30	13	502	997	9	.9	1.0	1.0	1.2	1.2	2.5	1.2	1.2	2.5
6	Hooghly	30	34	19	30	1,019	2,014	1.9	1.9	2.2	2.2	2.9	2.9	2.8	1.9	1.9	2.9
7	Presidency Division.	46	21	16	146	2,507	4,736	1.9	1.9	1.5	1.5	1.8	1.8	3.2	1.2	1.2	3.2
8	24-Parganas	17	16	17	24	1,211	1,755	1.7	1.7	1.8	1.8	2.2	2.2	2.2	1.9	1.9	2.2
9	Calcutta	45	15	36	104	1,284	2,638	1.8	1.8	1.2	1.2	1.9	1.9	2.2	1.0	1.0	2.2
10	Nadia	21	4	5	53	1,776	1,516	1.2	1.2	1.2	1.2	1.9	1.9	2.5	1.2	1.2	2.5
11	Murshidabad	16	12	24	80	1,101	988	1.2	1.2	1.2	1.2	1.0	1.0	2.8	1.0	1.0	2.8
12	Jessore	18	14	8	66	751	1,377	1.0	1.0	1.0	1.0	1.0	1.0	2.1	1.0	1.0	2.1
13	Rajshahi Division.	3	9	9	24	368	648	5	5	4	4	6	6	2.3	.6	.6	2.3
14	Rajshahi	1	1	27	19	583	1,079	6	6	6	6	1.1	1.1	.2	.2	.2	.2
15	Dinajpur	2	2	4	4	72	1,134	1	1	1	1	0.4	0.4	.1	.1	.1	.1
16	Jalpaiguri	1	1	..	..	..	..	11	11	11	11	0.9	0.9	.1	.1	.1	.1
17	Darjeeling	6	36	1,460	481	1,220	2,324	3	3	1,04	1,04	1.0	1.0	1.1	1.1	1.1	1.1
18	Rangpur	5	11	49	61	180	328	148	148	180	180	3.3	3.3	1.0	1.0	1.0	1.0
19	Bogra	17	26	80	270	784	1,491	1.1	1.1	1.0	1.0	1.2	1.2	2.1	1.1	1.1	2.1
20	Pabna	4	1	1	10	662	1,258	1.3	1.3	1.3	1.3	1.3	1.3	2.1	1.3	1.3	2.1
21	Dacca Division.	66	33	178	1,003	3,403	3,121	2.2	2.2	2.0	2.0	2.1	2.1	2.2	1.0	1.0	2.2
22	Dacca	37	132	672	1,936	2,428	4,720	1.0	1.0	2.4	2.4	2.3	2.3	2.8	1.0	1.0	2.8
23	Mymensingh	60	57	77	324	2,776	5,251	2.4	2.4	2.4	2.4	2.0	2.0	2.8	1.0	1.0	2.8
24	Faridpur	29	12	46	266	1,247	2,713	1.1	1.1	1.1	1.1	1.0	1.0	1.8	1.0	1.0	1.8
25	Chittagong Division.	46	4	17	17	348	710	4	4	4	4	.9	.9	1.3	.9	.9	1.3
26	Chittagong	1	2	92	92	665	1,270	1.5	1.5	1.4	1.4	1.4	1.4	2.2	1.4	1.4	2.2
27	Noakhali	202	164	203	203	2,103	3,986	1,883	1,883	1,883	1,883	1.2	1.2	1.8	1.4	1.4	1.8
28	Total for the Bengal Presidency.	809	719	3,083	5,945	28,809	26,154	54,963	54,963	26,154	26,154	1.2	1.2	1.8	1.2	1.2	1.8

Annual Form No. VIII.—Deaths registered from SMALL-POX in the districts of the Bengal Presidency during each month of the year 1930.

No.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	August.
		Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.								
1	Burdwan	29	25	2,817	123	36	8	24	72	38	16	12	5
2	Birbhum	15	12	2,302	121	17	5	34	25	16	12	12	
3	Bankura	22	18	4,003	192	14	29	22	37	20	20	12	
4	Midnapur	38	28	10,351	237	37	13	60	48	19	26	26	
5	Hoochhey	28	26	2,197	452	15	37	69	71	33	33	23	
6	Howrah	13	11	863	107	36	48	96	97	50	50	36	
	Burdwan Division.												
7	24-Parganas	63	52	3,427	156	128	86	99	115	101	59	37	
8	Calcutta	1	1	1	1	124	207	486	434	286	151	55	20
9	Nadia	30	17	2,353	42	2	8	30	32	30	18	6	9
10	Murshidabad	26	17	1,974	112	21	13	10	40	63	35	16	5
11	Jessore	27	19	3,613	36	2	4	12	28	20	5	27	17
12	Khulna	25	16	2,011	16	5	3	5	4	7	4	6	4
	Presidency Division.												
13	Rajshahi	26	8	4,487	24	1	7	6	4	49	2	1	1
14	Dinajpur	31	21	6,612	66	9	6	5	26	2	29	20	
15	Jalpaiguri	18	8	722	18	..	..	3	..	2	5	2	2
16	Darjeeling	6	3	304	3	..	2	1	..	..	..	..	1
17	Rangpur	32	24	4,102	261	25	28	37	78	103	71	38	27
18	Bogra	14	8	2,780	19	5	2	3	13	1	4	2	11
19	Pabna	19	14	2,539	73	8	5	6	19	1	10	14	1
20	Malda	18	7	2,239	21	1	..	2	2	2	6	3	5
	Rajshahi Division.												
21	Darca	14	14	4,737	1,588	218	216	310	433	321	218	182	
22	Mymensingh	60	48	7,354	206	56	60	86	68	59	69	55	50
23	Faridpur	17	16	3,363	240	118	134	188	184	142	90	53	40
24	Bakarganj	22	17	2,990	77	11	8	22	41	23	26	7	2
	Dacca Division.												
25	Chittagong	22	11	870	57	11	28	85	75	45	22	10	4
26	Noakhali	15	11	1,719	36	8	3	19	19	10	36	22	6
27	Tippera	23	20	4,018	281	62	45	63	63	56	28	44	55
	Chittagong Division.												
28	Total for the Bengal Presidency.	654	472	84,748	4,565	878	1,005	1,736	2,014	1,681	1,193	786	563

No.	Districts.	Septem- ber.			Octo- ber.			Total.			Number of those deaths among children.			Ratio of deaths per 1,000 population.			Mean ratio per 1,000 during previous five years.
		Decem- ber.	Novem- ber.		Male.	Female.	Total.	Under one year.	One year and under ten years.	Male.	Fema e.	Total.	1	2	3		
Burdwan Division.																	
1	Burdwan	17	30	18	27	192	174	366	4	3	.2	.8	.2	.7	.7	.7	.8
2	Birbhum	4	1	5	3	78	87	165	8	2	.2	.2	.2	.2	.2	.2	.7
3	Bankura	3	6	13	43	126	110	236	..	2	.2	.2	.2	.2	.2	.2	.3
4	Midnapur	14	9	3	14	171	119	290	..	1	.1	.1	.1	.1	.1	.1	.9
5	Hoochly	36	15	23	58	289	282	571	31	5	.5	.5	.5	.5	.5	.5	.7
6	Howrah	20	8	21	59	347	257	604	..	6	.6	.6	.6	.6	.6	.6	1.3
Presidency Division.																	
7	24-Parganas	10	11	22	9	383	314	697	..	2	.3	.3	.3	.3	.3	.3	.7
8	Calcutta	9	8	10	28	972	846	1,818	20	94	1.7	1.7	1.7	1.7	1.7	1.7	1.6
9	Nadia	6	2	..	5	63	80	143	..	..	.1	.1	.1	.1	.1	.1	.4
10	Murshidabad	1	1	..	..	102	109	211	17	..	.2	.2	.2	.2	.2	.2	1.6
11	Jessore	7	10	..	9	81	60	141	..	..	.1	.1	.1	.1	.1	.1	.2
12	Khulna	4	..	..	4	26	20	46	..	..	.03	.03	.03	.03	.03	.03	.1
Rajshahi Division.																	
13	Rajshahi	1	..	1	..	8	..	24	10	1	3	..	..	..	..	..	.2
14	Dinajpur	4	..	..	..	..	..	..	10	6	13	..	..	..	..	..	.5
15	Jalpaiguri	1	..	1	..	..	..	..	5	5	..	..	..	..	..	..	.1
16	Darjeeling	..	..	14	..	18	..	40	8	13	..	..	..	..	..	..	.02
17	Rangpur	..	..	13	..	7	..	..	244	248	492	..	..	..	..	..	.04
18	Bogra	..	..	..	..	1	..	1	22	27	49	..	..	..	..	..	.2
19	Pabna	..	..	4	..	1	..	1	47	28	75	..	..	..	..	..	.05
20	Malda	..	..	..	8	..	..	1	18	17	35	..	..	..	..	..	1.3
Dacca Division.																	
21	Dacca	72	58	55	64	64	1,179	1,106	2,285	194	453	..	..	..	..	..	1.0
22	Mymensingh	36	30	23	25	25	303	261	617	30	76	..	..	..	..	..	.5
23	Faridpur	31	12	5	17	17	519	1,014	1,014	59	263	..	..	..	..	..	.6
24	Bakarganj	5	..	..	2	91	56	147	..	..	..	..	..	..	..	..	.1
Chittagong Division.																	
25	Chittagong	9	3	5	5	135	167	302	..	56	102	..	..	..	..	..	.8
26	Noakhali	..	12	7	3	71	66	137	..	..	..	..	..	..	..	..	.3
27	Tippera	..	55	67	35	16	316	273	589	..	..	..	..	..	..	..	.4
Total for the Bengal Presidency.																	
28		382	296	280	454	5,873	5,395	11,268	435	1,172	2	2	2	2	2	2	.6

Annual Form No. IX.—Deaths registered from FEVERS in the districts of the Bengal Presidency during each month of the year 1930.

189

No.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	August.	
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.									
Burdwan Division.														
1	Burdwan	29	29	2,817	1,960	2,253	1,949	1,932	1,744	1,290	1,179	1,451		
2	Birbhum	15	15	2,302	2,011	1,498	1,229	1,498	1,824	1,663	1,109	1,073	1,078	
3	Bankura	22	22	4,003	3,251	1,532	1,167	1,551	1,655	1,125	1,027	799	1,247	
4	Midnapur	38	38	10,351	9,053	2,993	3,110	3,131	3,039	2,163	2,058	1,754	1,930	
5	Hoochly	28	28	2,197	1,902	1,130	966	1,042	852	824	783	719	900	
6	Howrah	13	13	863	425	692	623	655	709	475	397	333	493	
Presidency Division.														
7	24-Parganas	63	63	3,427	2,912	2,617	2,175	1,907	1,618	1,346	1,530	1,670		
8	Calcutta	1	1	1	1	1	1	293	315	320	249	274		
9	Nadia	30	30	2,353	2,281	4,800	3,490	2,481	2,856	2,757	2,066	1,594	1,962	
10	Murshidabad	26	26	1,974	1,753	3,209	1,995	2,004	2,724	2,418	1,590	1,443	1,486	
11	Jessore	27	27	3,613	3,304	5,719	3,800	2,748	3,200	2,507	1,812	2,076	2,011	
12	Khulna	25	25	2,011	1,996	2,224	1,458	1,471	1,451	1,182	1,006	1,185	1,136	
Rajshahi Division.														
13	Rajshahi	26	26	4,487	4,263	4,458	4,263	3,278	3,165	3,071	2,915	2,306	2,192	
14	Dinajpur	31	31	6,612	4,616	5,111	5,111	3,131	2,981	3,396	2,903	3,108	2,817	
15	Jalpaiguri	18	18	722	461	1,154	1,254	966	1,007	1,371	1,344	1,281	2,374	
16	Darjeeling	6	6	304	215	4,441	4,437	355	476	509	440	446	855	
17	Rangpur	32	32	4,102	3,836	4,552	3,250	2,883	3,362	3,185	3,419	2,687	2,854	
18	Bogra	14	14	2,780	1,913	1,619	1,096	1,004	1,341	1,248	784	1,127	1,271	
19	Pabna	19	19	2,539	1,324	5,117	2,953	2,119	2,551	2,242	1,393	1,726	1,535	
20	Malda	18	18	2,239	1,493	3,238	2,117	1,948	2,117	1,636	1,656	1,527	1,669	
Dacca Division.														
21	Dacca	14	14	4,737	4,230	4,562	4,230	2,974	2,536	3,374	2,712	1,914	2,085	
22	Myrmensingh	60	60	7,354	7,250	6,106	4,210	4,154	4,250	4,075	3,641	3,937	3,162	
23	Faridpur	17	17	3,363	2,970	4,503	2,921	2,882	3,386	2,952	2,172	2,027	2,062	
24	Bakarganj	22	22	2,990	2,552	3,382	2,207	2,207	2,268	2,363	1,998	1,658	1,570	
Chittagong Division.														
25	Chittagong	22	22	870	800	2,317	2,229	1,879	1,636	1,977	2,400	2,419	1,814	
26	Noakhali	15	15	1,719	1,046	2,272	1,443	1,252	1,252	1,652	1,488	1,821	1,181	
27	Tippera	23	23	4,018	3,189	2,630	2,282	2,361	2,361	2,094	2,121	1,974	1,687	
	Total for the Bengal Presidency.	654	654	84,748	71,202	80,266	57,993	54,371	59,265	52,654	44,839	43,730	42,444	

No.	Districts.	Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 during previous five years.	
		September.	October.	November.	December.	
		Total.	Male.	Female.	Total.	
1	Burdwan Division.					
2	Burdwan ..	1,788	3,144	11,578	11,948	17.2
3	Birbhum ..	1,268	2,336	8,888	9,216	20.9
4	Bankura ..	1,142	1,712	7,926	8,330	15.6
5	Midnapur ..	2,224	3,396	16,169	16,447	15.1
6	Hooghly ..	952	1,458	5,960	6,241	15.0
	Howrah ..	496	647	3,374	3,361	10.0
7	Presidency Division.					
8	24-Parganas ..	1,988	2,043	11,931	11,365	9.5
9	Calcutta ..	2,356	3,317	1,807	1,674	4.7
10	Nadia ..	2,363	4,711	19,055	18,609	25.3
11	Murshidabad ..	2,102	4,177	15,074	14,546	24.1
12	Jessore ..	2,113	3,657	19,515	18,272	21.9
	Khulna ..	1,332	1,616	8,722	8,638	12.0
13	Rajshahi Division.					
14	Rajshahi ..	3,080	3,432	19,643	18,936	26.2
15	Dinajpur ..	3,014	4,081	22,312	20,052	24.8
16	Jalpaiguri ..	1,296	1,242	7,778	7,067	16.3
17	Darjeeing ..	605	1,435	1,640	1,479	15.4
18	Rangpur ..	3,446	3,653	2,941	2,555	19.7
19	Bogra ..	1,085	6,352	5,605	5,496	20.5
20	Pabna ..	1,414	1,675	1,741	21,597	45,410
	Malda ..	1,780	2,448	3,236	7,765	18.1
21	Dacca Division.					
22	Dacca ..	3,144	4,022	14,629	14,202	15.2
23	Mymensingh ..	2,180	5,164	14,609	12,900	21.4
24	Faridpur ..	3,737	5,156	27,764	25,553	27.5
	Bakarganj ..	2,104	6,387	19,111	17,942	16.6
25	Chittagong Division.					
26	Chittagong ..	2,897	2,150	13,533	27,958	11.7
27	Noakhali ..	1,203	5,035	9,543	18,742	13.0
	Tippera ..	1,395	2,110	3,285	12,444	9.3
28	Total for the Bengal Presidency.	48,717	60,461	73,723	360,603	15.0
						15.1
29						17.0

Annual Form No. X.—Deaths registered from DYSENTERY AND DIARRHOEA in the districts of the Bengal Presidency during each month of the year 1930.

191

No.	Districts.	Circles of Registration.		Villages.		Number from which deaths from dysentery and diarrhoea were reported.	Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	January.	February.	March.	April.	May.	June.	July.	August.				
		Number from which deaths from dysentery and diarrhoea were reported.	Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	Number in each district.															
Burdwan Division.																				
1	Burdwan	29	2,817	536	78	77														
2	Birbhum	15	2,302	300	42	54														
3	Bankura	22	4,003	678	94	117														
4	Midnapur	38	10,351	1,411	205	190														
5	Hooghly	28	2,197	1,764	142	113														
6	Howrah	13	863	318	283	224														
Presidency Division.																				
7	24-Parganas	63	3,427	558	250	153														
8	Calcutta	1	1	1	282	172														
9	Nadia	30	2,353	337	45	249														
10	Murshidabad	26	1,974	136	24	48														
11	Jessore	27	3,613	413	21	24														
12	Khulna	25	2,011	361	34	24														
Rajshahi Division.																				
13	Rajshahi	26	4,487	251	62	27														
14	Dinajpur	31	6,612	387	85	32														
15	Jalpaiguri	18	7,222	306	111	109														
16	Darjeeling	6	304	171	26	18														
17	Rangpur	32	4,102	680	132	72														
18	Bogra	14	2,780	174	31	9														
19	Pabna	19	2,539	172	47	21														
20	Malda	16	2,239	29	41	14														
Dacca Division.																				
21	Dacca	14	4,737	1,142	416	264														
22	Mymensingh	60	7,354	900	162	112														
23	Faridpur	17	3,363	774	258	122														
24	Bakarganj	22	2,990	416	125	96														
Chittagong Division.																				
25	Chittagong	22	870	171	37	16														
26	Noakhali	15	1,719	295	161	121														
27	Tippera	23	4,018	553	206	191														
Total for the Bengal Presidency.		654	638	84,748	12,214	4,404	3,058	3,064	3,524	3,429	3,058	3,064	3,524	3,429	3,058	3,064	3,524	2,736	2,790	2,443

No.	Districts.	September.			October.			November.			December.			Total.			Ratio of deaths per 1,000 of population.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 during previous five years.		
Burdwan Division.																			
1	Burdwan	90	95	185	121	689	1,270	96	95	191	8	9	17	7	7	7	.7		
2	Birbhum	41	29	70	24	241	460	24	21	45	6	6	2	2	2	2	.2		
3	Bankura	96	104	190	124	742	1,357	124	115	219	1.2	1.3	1.0	1.0	1.0	1.0	1.0		
4	Midnapur	149	222	371	302	1,665	3,030	187	138	245	1.0	1.1	1.6	1.6	1.6	1.6	1.6		
5	Hooghly	105	134	239	187	738	1,521	258	211	1,365	1.5	1.4	1.4	1.4	1.4	1.4	1.4		
6	Howrah	259	258	517	273	1,421	3,106	259	258	517	2.7	3.6	3.1	3.1	3.1	3.1	3.3		
Presidency Division.																			
7	24-Parganas	154	237	401	157	260	1,144	24	21	285	9	9	9	9	9	9	.9		
8	Calcutta	29	58	87	251	241	1,627	74	74	2.2	2	2	2	2	2	2	3.3		
9	Nadia	104	33	137	74	459	357	31	24	459	6	6	5	5	5	5	.4		
10	Murshidabad	222	31	253	22	30	171	187	195	366	3	3	3	3	3	3	.4		
11	Jessore	134	37	171	77	75	288	134	414	702	4	4	4	4	4	4	.2		
12	Khulna	258	39	337	79	64	357	258	381	738	5	5	5	5	5	5	.3		
Rajshahi Division.																			
13	Rajshahi	33	59	98	48	40	199	49	52	275	3	3	3	3	3	3	.1		
14	Dinajpur	36	49	85	52	68	230	36	45	301	2	2	2	2	2	2	.1		
15	Jalpaiguri	164	145	310	124	133	932	149	120	276	9	9	9	9	9	9	1.1		
16	Darjeeling	49	40	89	37	26	239	159	177	993	7	7	7	7	7	7	2.0		
17	Ranipur	120	159	279	45	176	759	120	23	213	404	4	4	4	4	4	.2		
18	Bogra	23	43	66	45	55	191	23	28	248	3	3	3	3	3	3	.3		
19	Pabna	14	28	42	42	39	154	14	13	107	2	2	2	2	2	2	.1		
20	Malda	5	16	21	16	12	90	5	12	107	1	1	1	1	1	1	.1		
Dacca Division.																			
21	Dacca	298	490	788	577	642	2,154	298	304	2,425	5	5	5	5	5	5	1.0		
22	Mymensingh	129	228	357	285	298	2,167	194	246	1,126	4	4	4	4	4	4	.4		
23	Faridpur	114	194	308	198	90	2,243	55	567	1,239	1	1	1	1	1	1	.7		
24	Bakarganj	46	55	101	72	72	949	55	567	382	5	5	5	5	5	5	.4		
Chittagong Division.																			
25	Chittagong	78	67	145	71	80	263	88	233	228	3	3	3	3	3	3	.3		
26	Noakhali	88	103	191	114	100	1,108	142	250	1,154	934	9	9	9	9	9	9	.4	
27	Tippera	2,0536	
Total for the Bengal Presidency.																			
		2,610	3,291	5,901	4,199	18,493	20,874	3,819	3,291	9,000	9	9	8	8	8	8	.6		

Annual Form No. XI.—Deaths registered from RESPIRATORY DISEASES in the districts of the Bengal Presidency during each month of the year 1930.

193

No.	Districts.	Circles of Registration.	Villages.		January.	February.	March.	April.	May.	June.	July.	August.	150 73 105 211 238 280		
			Number in each district.	Number from respiratory diseases were reported.											
Burdwan Division.															
1 Burdwan	2 Birbhum	3 Bankura	4 Midnapur	5 Hooghly	6 Howrah	7 24-Parganas	8 Calcutta	9 Nadia	10 Murshidabad	11 Jessor	12 Khulna	13	14		
29	29	29	738	264	245	278	208	187	126	131	123	150	73		
15	15	22	2,302	710	129	211	228	190	116	103	105	211	105		
22	22	38	4,003	707	169	282	337	268	150	150	180	235	211		
38	38	28	10,351	1,637	427	56	463	309	226	226	209	215	238		
28	28	13	2,197	683	297	328	299	262	272	272	261	272	280		
13			863	282	361	346	365	325							
Presidency Division.															
7 24-Parganas	8 Calcutta	9 Nadia	10 Murshidabad	11 Jessor	12 Khulna	13	14	15	16	17	18	19	20	236 717 98 58 93 74	
63	62	61	3,427	616	562	396	408	319	249	258	258	298	236		
1	1	30	2,353	560	1,157	939	831	813	717	634	793	793	717		
30	30	26	1,974	202	1,63	178	168	132	106	94	74	74	98		
26	26	27	3,613	527	65	98	113	123	90	50	45	45	58		
27	27	25	2,011	394	212	173	122	149	98	92	89	89	93		
25	25				133	93	67	107	83	60	110	110	74		
13															
Rajshahi Division.															
13 Rajshahi	14 Dinajpur	15 Jalpaiguri	16 Darjeeling	17 Rangpur	18 Bogra	19 Pabna	20 Malda	21	38	45	37	30	28 30 179		
26	25	25	4,487	166	6,612	801	152	71	107	119	86	86	286		
31	31	18	6,722	173	304	238	348	401	336	257	296	296	358		
18	18	6	3,102	65	4,102	598	65	76	72	62	71	71	78		
6	6	32	3,780	150	2,780	201	124	124	123	145	147	147	142		
32	32	14	2,539	31	2,539	210	31	38	38	42	48	48	33		
14	14	19	2,239	91	2,239	22	91	70	70	57	57	57	44		
19	19	16		40	22	40	40	27	27	32	32	32	26		
18	18														
Dacca Division.															
21 Dacca	22 Mymensingh	23 Faridpur	24 Bakarganj	25 Chittagong	26 Noakhali	27 Tippera	28	29	30	270	262	232	138	215	
14	14	17	22	22	15	23	19	143	143	176	129	125	93	118	
59	59	17	21	21	15	23	15	41	41	181	200	174	144	122	
17	17	21								32	32	21	25	22	
22	22													28	
654	645	84,748	12,303	5,944	5,370	5,152	5,152	5,332	5,332	4,305	4,305	3,697	4,083	3,783	
Total for the Presidency.															
25 Chittagong	26 Noakhali	27 Tippera								21	20	116	136	11	
										104	140	62	151	104	
										103	104	128	166	103	

No.	Districts.	September.			October.			November.			December.			Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 during previous five years.
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
Burdwan Division.																				
1	Burdwan	123	141	192	220	1,498	767	2,265	2·0	1·1	1·6	1·3	1·3	1·6	1·3	1·3	1·3	1·3	1·3	
2	Birbhum	119	100	93	139	1,062	583	1,645	2·5	1·4	1·9	1·5	1·5	1·9	1·5	1·5	1·5	1·5	1·5	
3	Bankura	104	143	124	177	1,386	735	2,121	2·7	1·4	2·1	1·3	1·3	2·1	1·3	1·3	1·3	1·3	1·3	
4	Midnapur	156	289	322	307	2,492	1,392	3,884	1·9	1·0	1·5	1·8	1·8	2·3	1·5	1·5	1·8	1·8	1·8	
5	Hooghly	200	223	301	275	1,884	1,182	3,066	3·3	2·3	2·8	2·7	2·7	3·2	2·7	2·7	2·7	2·7	2·7	
6	Howrah	240	271	350	363	2,230	1,466	3,696	4·2	3·2	3·7	3·7	3·7	3·7	3·7	3·7	3·7	3·7	3·7	
Presidency Division.																				
7	24-Parganas	256	262	341	444	2,422	1,607	4,029	1·8	1·4	1·6	1·2	1·2	1·6	1·2	1·2	1·2	1·2	1·2	
8	Calcutta	602	608	713	831	5,383	3,972	9,355	7·4	4·1	7·4	9·7	9·7	8·7	9·7	9·7	9·7	9·7	9·7	
9	Nadia	94	94	122	118	1,108	413	1,521	1·4	1·6	1·6	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	
10	Murshidabad	46	52	40	49	559	270	829	1·9	1·4	1·6	2·0	2·0	1·6	2·0	2·0	2·0	2·0	2·0	
11	Jessore	129	133	100	122	1,070	442	1,512	1·2	1·0	1·5	1·3	1·3	1·6	1·3	1·3	1·3	1·3	1·3	
12	Khulna	74	103	108	162	746	428	1,174	1·0	1·0	1·0	1·4	1·4	1·4	1·4	1·4	1·4	1·4	1·4	
Rajshahi Division.																				
13	Rajshahi	28	37	21	37	278	216	390	1·2	1·1	1·2	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	
14	Dinajpur	157	143	258	287	1,057	605	1,662	1·2	1·2	1·2	1·6	1·6	1·6	1·6	1·6	1·6	1·6	1·6	
15	Jalpaiguri	308	288	293	57	2,211	1,421	3,632	4·4	3·5	4·4	3·4	3·4	3·4	3·4	3·4	3·4	3·4	3·4	
16	Darjeeling	77	128	165	192	482	472	954	3·2	3·2	3·2	2·0	2·0	2·0	2·0	2·0	2·0	2·0	2·0	
17	Rangpur	183	259	259	28	1,223	720	1,943	1·9	1·9	1·9	2·2	2·2	2·2	2·2	2·2	2·2	2·2	2·2	
18	Bogra	34	44	44	28	149	149	437	1·5	1·5	1·5	1·4	1·4	1·4	1·4	1·4	1·4	1·4	1·4	
19	Pabna	32	61	66	72	539	195	734	1·8	1·8	1·8	1·5	1·5	1·5	1·5	1·5	1·5	1·5	1·5	
20	Malda	16	17	15	19	199	90	289	1·4	1·4	1·4	1·1	1·1	1·1	1·1	1·1	1·1	1·1	1·1	
Dacca Division.																				
21	Dacca	222	263	282	392	1,854	1,195	3,049	1·2	1·2	1·2	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	
22	Mymeningh	112	115	135	194	1,105	493	1,598	1·4	1·4	1·4	1·3	1·3	1·3	1·3	1·3	1·3	1·3	1·3	
23	Faridpur	133	188	289	306	1,417	866	2,283	1·2	1·2	1·2	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	
24	Bakarganj	31	33	20	83	250	136	386	1·2	1·2	1·2	1·1	1·1	1·1	1·1	1·1	1·1	1·1	1·1	
Chittagong Division.																				
25	Chittagong	86	69	124	282	225	507	1·3	1·3	1·3	1·3	1·2	1·2	1·2	1·2	1·2	1·2	1·2	1·2	
26	Noakhali	113	120	265	962	770	1,732	1·5	1·5	1·5	1·5	1·5	1·5	1·5	1·5	1·5	1·5	1·5	1·5	
27	Tippera	67	73	120	740	649	740	1,389	1·5	1·5	1·5	1·4	1·4	1·4	1·4	1·4	1·4	1·4	1·4	
Total for the Bengal Presidency.		3,742	4,387	4,620	5,667	34,727	21,355	56,082	1·4	1·0	1·2	·8								

Annual Form No. XII.—Deaths registered from PLAGUE in the districts of the Bengal Presidency during each month of the year 1930.

No.	Districts.	Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 during previous five years.
		September.	October.	November.	
		Total.	Male.	Female.	Total.
Burdwan Division.					
1	Burdwan	..	..	..	..
2	Birbhum	..	..	..	..
3	Bankura	..	..	..	..
4	Midnapur	..	..	..	..
5	Hooghly	..	..	..	..
6	Howrah	..	..	..	..
Presidency Division.					
7	Parganas	..	..	..	..
8	Calcutta	..	..	..	..
9	Nadia	..	..	..	..
10	Murshidabad	..	..	..	..
11	Jessore	..	..	..	..
12	Khulna	..	..	..	..
Rajshahi Division.					
13	Rajshahi	..	..	..	..
14	Dinajpur	..	..	..	..
15	Jalpaiguri	..	..	..	..
16	Darjeeling	..	..	..	..
17	Rangpur	..	..	..	..
18	Bogra	..	..	..	..
19	Pabna	..	..	..	..
20	Malda	..	..	..	..
Dacca Division.					
21	Dacca	..	..	..	..
22	Mymensingh	..	..	..	..
23	Faridpur	..	..	..	..
24	Bakarganj	..	..	..	..
Chittagong Division.					
25	Chittagong	..	..	..	..
26	Noakhali	..	..	..	..
27	Tippera	..	..	..	..
Total for the Bengal Presidency.					
	

Appendix II

**Statements of Vaccination operations in Bengal
for the year 1930-31.**

STATEMENT No. I.

Showing particulars of vaccinations in the Presidency of Bengal during 1930-31.

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Serial No.	Urban and rural areas.	Population according to the last Census.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Primary vaccinations.			Successful.						
					Male.		Total.	Under one year.		Total of all ages.	Under one year.		Unknown.				
					Average number of persons vaccinated by each vaccinator.	Total number of vaccinations performed.	9	10	11	12	13	14					
RURAL AREAS.																	
Burdwan Division.																	
1	Burdwan	1,343,185	500	36	54,464	35,435	89,899	2,497	4,7914	3,702	29,074	45,808	676				
2	Asansol	..	..	14	34,819	21,859	56,678	4,048	14,840	3,771	10,047	14,734	80		
3	Birbhum	..	..	16	56,133	34,562	90,695	5,668	40,777	6,579	28,333	39,225	873		
4	Bankura	..	..	43	41,145	30,891	72,036	1,907	39,785	6,699	29,440	39,087	5		
5	Midnapur	..	..	115	191,430	121,288	312,718	2,719	113,173	22,416	67,357	110,146	2,175		
6	Hooghly	..	..	31	30,218	17,377	47,595	1,503	27,470	2,888	20,209	26,410	306		
7	Howrah	..	..	27	37,178	16,560	53,738	1,990	26,389	4,465	19,967	26,239	91		
Presidency Division.																	
8	24-Parganas	..	..	91	133,568	77,378	210,946	2,318	115,311	27,292	71,012	109,527	2,046		
9	Nadia	..	..	51	59,353	37,280	96,633	1,894	55,226	14,128	37,993	53,183	1,719		
10	Murshidabad	..	..	66	80,575	50,647	131,222	1,988	57,268	17,326	34,738	54,108	1,352		
11	Jessore	..	..	99	195,868	133,112	328,980	3,323	91,833	3,452	65,347	87,787	1,468		
12	Khulna	..	..	87	139,908	110,909	250,817	2,882	46,135	6,441	31,177	46,051	58		
Rajshahi Division.																	
13	Rajshahi	..	..	48,511	30,190	78,701	2,623	40,541	11,949	27,417	40,205	117			
14	Dinajpur	..	..	60	96,144	51,088	147,232	2,453	91,929	9,929	59,218	84,895	2,903		
15	Jalpaiguri	..	..	31	49,140	22,271	71,411	2,629	26,292	6,921	14,488	24,283	575		
16	Darjeeling	..	..	215	9,356	8,057	17,413	1,088	8,475	3,254	3,819	8,080	368		
17	Rangpur	..	..	141	225,657	79,198	304,855	2,162	101,420	3,999	73,684	91,309	4,567		
18	Bogra	..	..	15	62,720	30,758	93,478	6,231	46,442	4,235	28,436	40,480	3,111		
19	Pabna	..	..	61	71,634	41,354	112,988	1,852	64,678	7,451	44,109	59,611	2,321		
20	Malda	..	..	26	24,118	18,272	42,390	1,630	29,626	8,294	15,774	24,267	4,542		

Serial No.	Re-vaccinations.		Percentage of successful cases in which results were known.		Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.	
	Total number of vaccina- tions performed.	Successful.	Unknown.	Primary.	Re-vacci- nation.	Persons success- fully vaccinated per mille of population.	Primary.	Re-vacci- nation.	Number.	Ratio per mille of population.
	15	16	17	18	19	20	21	22	23	24
RURAL AREAS.										
Burdwan Division.										
1	Burdwan	41,985	23,653	1,979	95.6	56.3	80.9	1.4	90,648	67.5
2	Asansol Mining Settlement	41,838	24,466	3,391	99.3	58.5	76.5	.5	1,122	.8
3	Birbhum	49,918	24,982	10,834	96.2	50.04	58.7	2.1	..	..
4	Bankura	32,251	17,577	835	98.2	54.5	58.7	.01	722	.9
5	Midnapur	190,565	112,624	33,501	97.3	56.4	85.8	1.9	280	.3
6	Hooghly	20,125	14,843	1,534	96.1	73.7	45.8	1.7	2,395	.9
7	Howrah	27,349	13,584	4,338	99.4	49.7	51.1	3.4	758	.8
									1,181	1.5
Presidency Division.										
8	Parganas	95,635	51,268	8,905	94.9	53.6	80.4	1.8	126,006	63.0
9	Nadia	41,407	25,573	5,285	96.3	61.8	56.6	3.1	71,142	51.1
10	Murshidabad	73,954	35,250	15,922	94.5	47.7	75.5	2.4	128,093	108.3
11	Jessore	237,147	122,722	35,574	95.6	51.7	123.7	1.6	86,744	51.0
12	Khulna	204,682	99,425	25,974	99.8	48.6	102.4	.1	113,699	80.0
									84	
Rajshahi Division.										
13	Rajshahi	38,160	23,575	4,511	99.1	61.8	43.8	.3	87,148	.2
14	Dinajpur	..	55,303	38,788	92.3	70.1	73.3	3.1	108,975	.5
15	Jalpaiguri	..	45,409	21,973	3,517	92.4	48.4	2.2	36,179	.08
16	Darjeeling	..	..	8,938	3,247	2,245	95.3	36.3	15,200	1
17	Rangpur	..	..	203,435	135,296	28,192	90.02	44.6	59.8	.6
18	Bogra	47,036	15,565	10,197	87.2	66.5	91.3	4.5	133,006	53.6
19	Pabna	48,310	21,562	7,003	92.2	33.09	54.3	6.7	42,219	40.9
20	Malda	..	12,764	5,265	5,708	41.2	60.4	3.6	92,059	68.4
									144,122	150.8

Serial No.	Urban and rural areas.	Total number of persons vaccinated.						Primary vaccinations.						
		Successful.			Unsuccessful.			Total of all ages.			Unknown.			
		Average number of persons vaccinated by each vaccinator.	Total number of vaccinations performed.	One year and under six years.	Under one year.	One year and under six years.	Total of all ages.	10	11	12	13	14		
1	Population according to the last Census.	Average number of vaccinators employed throughout the year.	Male.	Female.	Total.									
2	3	4	5	6	7	8	9	10	11	12	13	14		
21	Dacca Division.	2,975,915	1,097	71	123,118	197,797	2,785	107,635	4,960	99,810	98,327	6,244		
22	Dacca	..	759	233	429,495	674,161	2,893	338,017	14,129	179,380	291,359	24,532		
23	Mymensingh	..	934	97	101,330	62,246	1,686	69,094	3,169	47,458	64,855	3,151		
24	Faridpur	..	734	55	138,318	72,850	3,839	160,136	2,095	80,827	150,109	6,577		
25	Chittagong Division.	1,570,760	630	48	81,400	45,896	127,296	2,652	67,930	8,262	50,791	63,021	2,441	
26	Chittagong	..	968	52	162,581	66,090	228,671	4,397	103,362	10,222	67,942	92,690	7,467	
27	Noakhali	..	1,051	202	250,745	153,739	404,484	2,002	164,083	12,407	124,164	153,526	4,841	
28	Tippera	..	34	11	8,230	5,770	14,000	1,272	8,341	420	5,212	8,321	4	
	Total of Districts	..	43,584,279	578	1,825	2,937,156	4,694,422	4,631,578	2,537	2,104,122	230,855	1,367,223	1,947,643	84,610
MUNICIPALITIES.														
Burdwan District.														
Burdwan	..	34,616	..	3	2,766	1,605	4,371	1,457	1,322	175	729	1,211	18	
Kalna	..	8,424	..	1	2,264	366	630	249	249	73	161	245	..	
Katwa	..	6,823	..	1	256	140	396	174	174	114	60	174	..	
Dainhat	..	4,843	..	1	288	124	412	239	239	160	67	239	..	
Raniganj	..	14,536	..	1	1,540	1,540	3,632	557	557	131	385	556	..	
Asansol	..	26,499	..	2	2,686	1,382	4,068	2,034	1,392	146	1,172	1,389	..	
Suri	..	..	..	1	232	155	387	387	387	7	88	97	..

Serial No.	Urban and rural areas	Re-vaccinations.										Average annual number of deaths from small-pox during the previous five years.				
		Percentage of successful cases in which results were known.			Percentage of unknown cases to total cases.			Average annual number of persons successfully vaccinated during the previous five years.		Ratio per mille of population.		Number.		Ratio per mille of population.		
		Total number of vaccinations performed.	Successful.	Unknown.	Primary.	Re-vaccination.	Persons successfully vaccinated per mille of population.	Primary.	Re-vaccination.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.	
21	Dacca	90,162	40,524	19,055	91.4	44.9	46.7	5.8	21.1	156,192	52.5	3,220	1,08	1,08		
22	Mymensingh	336,144	200,658	47,860	86.2	59.7	104.6	7.3	14.2	376,999	80.2	2,287	.5	.5		
23	Faridpur	94,482	36,506	21,728	93.9	38.6	46.0	4.6	23.0	96,815	39.4	1,485	.7	.7		
24	Bakarganj	51,032	32,706	5,913	93.7	64.0	71.3	4.1	11.6	147,443	57.5	1,185	.07	.07		
Dacca Division.																
25	Chittagong	59,366	18,161	12,728	92.8	30.6	51.7	3.6	21.4	90,537	57.6	1,375	.9	.9		
26	Noakhali	125,309	43,537	48,001	89.7	34.7	92.9	7.2	38.3	107,647	73.5	1,381	.3	.3		
27	Tippera	240,401	157,367	26,591	93.6	65.5	116.0	2.9	11.06	231,610	86.4	1,235	.5	.5		
28	Chittagong Hill Tracts	5,659	2,888	87	99.8	51.03	64.7	.04	1.5	10,518	69.7	..	..	..
Chittagong Division.																
29	Total of Districts	2,527,766	1,363,585	395,958	92.5	53.9	75.9	4.02	15.7	2,855,395	65.5	28,052	.6	.6		
MUNICIPALITIES.																
Burdwan District.																
Burdwan	..	3,049	2,027	206	91.6	66.5	93.5	1.3	7.7	1,616	46.6	28	.8	.8		
Kalna	..	381	173	..	98.4	45.4	49.6	..	13.9	423	50.2	5	.5	.5		
Katwa	..	222	80	31	100.0	36.04	37.2	..	2.3	409	59.9	9	1.3	1.3		
Dainhat	..	173	151	4	100.0	87.2	80.5	..	..	343	70.8	4	1.8	1.8	
Raniganj	..	3,076	1,790	7	99.8	58.1	161.4	..	..	2,069	142.3	10	.6	.6	
Asansol	..	2,676	1,261	74	99.8	47.1	100.0	..	2.7	3,310	124.9	12	.4	.4		
Birbhum District.																
Suri	..	284	102	72	94.2	35.9	22.3	..	25.3	531	59.5	4	.4	.4		

Serial No.	Urban and rural areas.	Total number of persons vaccinated.						Primary vaccinations.					
		Population according to the last Census.			Average number of vaccinators employed throughout the year.			Average number of persons vaccinated by each vaccinator.			Successful.		
		Male.	Female.	Total.	Male.	Female.	Total.	Total number of vaccinations performed.	Under one year.	One year and under six years.	Total of all ages.	Unknown.	
1	Bankura District.												
	Bankura ..	25,412	..	25,412	2,653	1,447	4,100	2,050	1,067	337	597	1,039	212
	Vishnupur ..	19,398	..	19,398	10,027	7,116	17,143	2,749	3,453	141	2,411	3,212	..
	Sonamukhi ..	10,644	..	10,644	4,575	3,077	7,652	3,826	2,513	173	1,563	2,471	..
	Midnapur District.												
	Midnapur ..	28,965	..	28,965	552	1,375	1,927	963	481	99	380	472	..
	Ghatal ..	10,770	..	10,770	535	1,696	1,231	1,231	628	122	189	526	..
	Kharar ..	6,580	..	6,580	82	181	263	263	258	..	246	258	..
	Chandrapur ..	6,470	..	6,470	65	199	264	264	143	4	117	127	9
	Ramjibpur ..	6,700	..	6,700	79	131	210	210	132	49	65	118	..
	Khirpai ..	3,756	..	3,756	76	102	178	178	70	..	57	69	..
	Tamluk ..	5,348	..	5,348	869	1,081	1,950	975	275	30	208	261	1
	Hooghly District.												
	Hooghly-Chinsura ..	29,938	..	29,938	4,640	12,783	17,423	4,355	4,455	1,813	1,666	4,031	212
	Bansbaria ..	6,382	..	6,382	442	2,64	7,06	706	96	7	57	88	..
	Arambagh ..	7,857	..	7,857	302	233	535	535	279	32	240	278	..
	Serampur ..	33,197	..	33,197	3,265	1,710	4,975	2,487	1,859	749	767	1,828	12
	Rishra-Konnagar ..	23,259	..	23,259	3,963	1,246	5,209	5,209	604	124	401	564	30
	Uttarpur ..	8,657	..	8,657	205	123	328	328	150	15	122	150	..
	Kotrung ..	6,846	..	6,846	91	70	161	161	121	47	69	121	..
	Baidyabati ..	16,471	..	16,471	1,323	788	2,111	2,111	869	247	604	841	49
	Bhadreswar ..	22,081	..	22,081	776	377	1,153	1,153	792	76	645	742	..
	Champdani ..	24,652	..	24,652	696	257	953	953	644	28	696	644	..
	Howrah District.												
	Howrah ..	195,301	..	195,301	25,185	11,492	36,677	2,821	6,336	3,429	3,801	6,130	90
	Bally ..	23,209	..	23,209	1,392	513	1,905	1,905	832	55	480	652	45

Serial No.	Re-vaccinations.			Average annual number of persons successfully vaccinated during the previous five years.			Average annual number of deaths from small-pox during the previous five years.		
	Total number of vaccina- tions performed.	Percentage of successful cases in which results were known.		Persons success- fully vaecinated per mille of population.	Pereentage of un- known cases to total cases.		Re-vacei- nation.	Ratio per mille of population.	
		Successful.	Unknown.		Primary.	Re-vacei- nation.		Number.	Ratio per mille of population.
Urban and rural areas.									
15	16	17	18	19	20	21	22	23	24
Bankura District.									
Bankura	3,033	875	111	97.3	28.8	3.6	887	34.9	1.3
Vishnupur	13,690	7,031	869	93.02	51.3	6.3	728	37.5	1.1
Sonamukhi	5,139	1,011	3	98.3	19.6	.06	1,310	123.1	.1
Midnapur District.									
Midnapur	1,446	653	..	98.1	45.1	..	1,792	61.8	.9
Ghatal	603	112	35	83.9	18.5	..	421	39.09	.3
Kharar	5	5	..	100.0	100.0	..	431	65.5	2.1
Chandrakona	121	111	4	88.8	91.7	6.2	523	80.8	.9
Ramjibampur	77	65	..	88.7	84.4	..	260	38.8	1.04
Khirpai	108	85	3	98.6	78.7	41.0	152	40.4	1.2
Tamluk	1,675	355	217	94.9	21.1	..	540	64.6	1.6
Hooghly District.									
Hooghly-Chinsura	12,968	4,059	3,150	90.5	31.3	270.2	4.7	24.2	23
Bansbaria	610	336	99	91.6	55.0	66.4	..	16.2	2
Arambagh	256	165	17	99.6	64.4	56.4	..	6.6	.1
Serampur	3,116	955	1,429	98.3	30.6	83.8	..	45.8	1.1
Rishra-Konnagar	4,605	2,583	1,020	93.4	56.0	135.3	4.9	44.6	39
Uttarpara	178	178	..	100.0	100.0	37.9	..	22.7	1.7
Kotrung	40	33	..	100.0	82.5	22.5	..	68.1	1.5
Baidyabati	1,250	655	410	96.8	45.2	85.4	..	45.6	.8
Bhadreswar	361	109	99	93.7	34.4	38.5	6.1	103.8	1.1
Champdani	309	39	211	100.0	68.2	34.7	..	79.4	26
Howrah District.									
Howrah	30,354	5,924	2,814	96.7	19.5	61.7	1.4	9.2	1.7
Bally	1,073	439	64	78.5	40.9	47.0	5.4	5.9	2.1

Serial No.	Urban and rural areas.	Re-vaccinations.		Percentage of successful cases in which results were known.	Percentage of unknown cases to total cases.	Average annual number of persons successfully vaccinated during the previous five years.	Ratio per mille of population.	Number.						
		Total number of vaccinations performed.	Successful.											
		15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	
24-Parganas District.														
South Suburban	919	215	157	98.9	23.3	41.1	17.08	1.5	1.335	40.03	1.7	.5	1.2	.5
Tollyganj	1,447	147	..	99.2	10.1	47.4	..	..	1,053	48.6	12	..	..	..
Budge-Budge	2,126	788	..	33.7	37.06	72.8	1.8	..	2,389	92.8	17	..	..	..
Baranagar	3,323	2,432	8	99.6	73.1	106.8	4.4	..	2,023	63.05	42	1.3	1.3	1.3
Kamarhati	596	260	..	99.4	43.6	39.4	..	..	814	35.3	20	..	..	..
Rajpur	242	87	..	100.0	35.9	31.5	..	..	430	37.6	7	..	..	..
Baruipur	378	234	..	93.7	61.9	89.3	..	..	535	104.6	1	..	..	..
Jaynagar	166	15	..	100.0	9.0	22.6	..	..	291	34.6	10	1.1	1.1	1.1
North Dum Dum	110	110	..	100.0	100.0	100.0	..	..	171	39.1	7	1.6	1.6	1.6
Dum Dum	2,428	1,888	..	495	100.0	77.7	..	..	..	..	..	..	..	..
South Dum Dum	557	557	..	344	99.7	32.7	..	..	454	32.3	8	..	..	..
Kharda	51	45	..	103	99.5	18.4	..	..	126	22.9	7	1.2	1.2	1.2
Barrackpur	549	185	..	45	100.0	88.2	42.1	..	507	22.5	9	1.4	1.4	1.4
Panihati	689	286	..	30	100.0	99.2	25.5	..	..	48.0	12	1.1	1.1	1.1
North Barrackpur	659	53	..	113	100.0	41.5	63.9	..	408	26.4	15	..	..	..
Titagarh	702	205	..	2,760	907	100.0	8.04	36.6	..	868	16.5	48	..	..
Garnia	2,886	1,833	..	1,277	39	100.0	29.2	17.2	..	429	32.7	6	4	4
Naihati	3,601	1,25	..	1,833	907	98.1	50.9	114.3	..	1,016	43.6	11	..	..
Halisahar	466	227	..	1,25	39	94.9	59.4	63.4	..	1,130	17.7	2	..	..
Kanchrapara	145	166	..	1,25	20	100.0	86.2	44.2	..	261	25.2	3	..	..
Bhatpara	5,220	2,259	..	2,259	166	96.3	43.2	59.9	..	3,268	49.8	64	..	..
Baraset	325	216	..	216	109	100.0	66.4	61.0	..	33.5	47.2	6	..	..
Gobardanga	10	9	..	9	..	100.0	90.0	16.6	..	72	14.08	..	..	..
Basirhat	159	37	..	3	100.0	23.2	27.8	..	..	519	26.9	4	..	..
Baduria	442	98	..	91	..	100.0	22.1	37.8	..	416	29.5	1	0.7	0.7
Taki	183	91	..	..	100.0	59.8	120.6	..	..	632	121.5	2	..	..
Calcutta	233,155	59,686	..	44,469	95.6	25.6	38.2	2.6	19.07	57,149	53.0	1,415	1.3	1.3

Serial No.	Urban and rural areas.	Primary vaccinations.											
		Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.			Total number of vaccinations performed.			Successful.		
		Population according to the last Census.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Male.	Female.	Total.	Under one year.	One year and under six years.	Total of all ages.	Under one year.	One year and under six years.	Total of all ages.
1	Nadia District.	22,309 15,584 9,652 2,305 24,792 5,216 7,849 3,763 5,398 ..	.. .. .. .. .. .. .. .. ..	3 1 1 1 2 1 1 1 1	3,474 583 439 130 555 533 191 341 302 139	2,441 287 256 90 1,088 1,088 72 144 98 85	5,915 870 695 220 544 173 173 485 400 224	735 449 404 220 710 61 35 168 59 173	152 58 182 73 710 61 35 147 59 172	705 382 382 98 513 683 99 134 191 145	....................	....................	....................
2	Murshidabad District.	26,670 10,669 11,231 11,787 10,739 8,435 ..	.. .. .. .. .. .. ..	2 1 1 1 1 1 1	1,431 245 520 317 156 388	541 247 383 296 158 199	1,972 492 903 613 314 587	986 492 903 613 314 587	705 251 354 207 165 275 173	126 33 147 207 165 200 113	448 186 354 278 453 272 288	633 229 354 453 272 272 288	..............
3	Jessore District.	10,139 7,545 3,611 ..	.. .. .. ..	1 1 1	359 348 61	195 682 138	554 682 138	170 87 80	24 12 4	107 75 20	170 87 71	......	......
4	Khulna District.	16,049 10,259 5,570 ..	.. .. .. ..	1 1 1	1,262 1,163 181	836 130 117	2,098 2,293 298	380 190 121	58 68 46	269 190 169	362 190 121	.. .. ..	17

Serial No.	Urban and rural areas.	Population according to the last Census.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Primary vaccinations.									
					Total number of persons vaccinated.					Successful.				
					Male.	Female.	Total.	One year and under six years.	Under one year.	Total number of vaccinations performed.	10	11	12	13
1	Rajshahi District.	Rajshahi Nator	24,598 8,040	2 1	1,482 219	959 92	2,441 311	1,220 311	1,171 101	1,125 101	15	..		
	Dinajpur District.	Dinajpur	18,025	1	872	620	1,492	1,492	371	107	362	..		
	Jalpaiguri District.	Jalpaiguri	14,520	..	1	1,343	848	2,191	722	418	713	..		
	Darjeeling District.	Darjeeling Kurseong	22,258 6,445	..	1 1	4,597 540	2,982 436	7,579 976	583 457	369 223	538 456	40 1		
	Rangpur District.	Rangpur Gaibanda	19,076 6,056	..	2 1	705 455	336 74	1,041 529	520 529	495 66	377 54	7	486 66	..
	Bogra District.	Bogra Sherpur	12,322 3,984	..	1 1	956 86	734 82	1,690 168	440 137	42 7	250 102	..	434 132	2
	Pabna District.	Pabna Sirajganj	19,343 25,518	..	2 2	1,493 1,629	1,102 889	2,595 2,518	1,297 1,259	1,575 1,627	732 329	9	1,484 1,597	17

Serial No.	Re-vaccinations.		Percentage of suc- cessful cases in which results were known.		Percentage of un- known cases to total cases.		Average annual number of persons successfully vaccinated during the previous five years.		Average annual number of deaths from small-pox during the previous five years.		
	Total number of vaccina- tions per- formed.	Successful.	Unknown.	Primary.	Re-vacci- nation.	Persons success- fully vaccinated per mille of population.	Re-vacci- nation.	Number.	Ratio per mille of population.	Number.	Ratio per mille of population.
	15	16	17	18	19	20	21	22	23	24	25
Urban and rural areas.											
Rajshahi District.											
Rajshahi ..	1,270	388	188	96·0	30·5	61·5	1·2	14·8	1,566	63·6	·2
Nator ..	210	48	46	100·0	22·8	18·5	..	21·9	276	34·3	·2
Dinajpur District.											
Dinajpur ..	1,121	409	160	97·5	36·4	42·8	..	14·2	1,560	86·5	·3
Jalpaiguri District.											
Jalpaiguri ..	1,478	422	176	98·7	28·5	78·2	..	11·9	903	62·1	·07
Darjeeling District.											
Darjeeling ..	6,996	1,484	1,275	92·2	21·2	90·8	6·8	18·2	3,556	159·7	·1
Kurseong ..	519	309	27	99·7	59·5	118·7	·2	5·2	825	127·6	..
Rangpur District.											
Rangpur ..	546	222	80	98·1	40·6	37·1	1·4	14·6	1,857	97·3	·2
Gaihanda ..	463	262	9	100·0	56·5	54·1	..	1·9	546	90·1	·9
Bogra District.											
Bogra ..	1,250	210	164	98·6	16·8	52·3	·1·4	13·1	640	51·9	·5
Sherpur ..	31	11	..	96·3	35·4	35·9	..	..	98	24·6	·5
Pabna District.											
Pabna ..	1,020	239	6	94·2	43·0	99·4	·5	0·5	830	42·9	·6
Sirajganj ..	891	278	144	98·1	31·2	73·5	1·04	16·1	1,501	58·8	·8

Serial No.	Urban and rural areas.	Population according to the last Census.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.						Primary vaccinations.						
					Successful.			Unsuccessful.			Total of all ages.			Unknown.			
					Average number of persons vaccinated by each vaccinator.	Total number of vaccinations performed.	One year and under six years.	Average number of persons vaccinated by each vaccinator.	Total number of vaccinations performed.	One year and under one year.	Under one year.	One year and under six years.	Total of all ages.	Under one year.	One year and under six years.	Unknown.	
1					2	1	1	2	1	1	1	1	1	1	1	1	
					Malda District.			English Bazar	14,057	276	1,131	292	12	304	1	310	
								Malda	3,145	26	52	..	32	32	49		
								Nawabganj	12,633	339	573	..	383	436	8		
					Dacca District.			Dacca	119,450	7,843	17,154	2,247	2,159	4,679	188	225	..
								Narayanganj	30,602	956	3,643	216	999	1,224	67	116	..
					Mymensingh District.			Mymensingh	25,287	521	1,381	445	22	290	49	310	1
								Muktagacha	6,770	1,12	384	231	13	150	18	49	
								Netrokona	8,687	226	365	199	64	128	193		..
								Jamalpur	23,113	139	915	570	78	692	570		..
								Sherpur	17,813	371	382	1,077	399	39	272	396	
								Kishorganj	19,518	1,077	962	538	45	300	393		141
								Bajitpur	11,568	90	211	111	4	65	104		1
								Tangail	14,305	277	876	364	31	238	286		66
								Gauripur	7,420	652	1,635	549	..	251	388		25
					Faridpur District.			Faridpur	14,503	1,387	1,387	673	111	389	600		10
								Madaripur	25,297	935	935	658	53	583	658		..
								Rajbari	7,275	459	459	203	33	128	175		9
					Bakarganj District.			Barisal	1,245	482	1,727	387	17	201			
								Jhalakati	5,955	42	1,110	66	3	26			..
								Nalchiti	1,858	3	7	1	1	1	599		..
								Pirojpur	13,841	300	850	850	..	225	599		..
								Patuakhali	6,984	60	269	116	1	26	106		7
								Bhola	4,525	110	209	110	1	111	195		..

Primary vaccinations.													
Serial No.	Urban and rural areas.	Total number of persons vaccinated.		Successful.									
		Average population per square mile.	Average number of vaccinators employed throughout the year.	Male.	Female.	Total.	Average number of persons vaccinated by each vaccinator.	Total number of vaccinations performed.	One year and under six years.	Total of all ages.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Chittagong District.												
	Chittagong Cox's Bazar	36,030 4,632	.. ..	2 1	1,182 266	3,345 307	1,672 307	1,311 74	1,083 43	1,255 74	21 ..		
	Noakhali District.												
	Noakhali	7,715	..	2	1,392	385	1,777	888	528	14	361	455	28
	Tippera District.												
	Comilla	25,914	..	1	707	449	1,156	643	99	481	629	76	1
	Brahmanbaria	23,414	..	1	849	616	1,465	1,106	80	850	968	395	3
	Chandpur	15,118	..	1	813	290	1,103	428	71	305	395		
	Total of Municipalities . .	3,111,257	..	234	349,743	173,649	523,392	2,236	115,286	39,546	59,572	107,338	2,448
	Grand Total for the Presidency (Rural areas and Municipalities) . .	46,695,536	648	2,059	3,286,899	1,868,071	5,154,970	2,503	2,219,358	270,401	1,426,795	2,054,981	87,058
	Other Agencies.												
	Tea-gardens	..	..	..	..	..	..	17,736	..	..	10,088	357	3
	Factories	..	..	..	..	..	..	42,880	..	..	3,567		
	Stamers	..	..	..	..	..	..	1,480	..	..	..	..	..
	Railways	..	..	..	..	..	..	17,699	..	..	3,922	8	1,118
	Jails	..	..	..	..	..	..	46,124	..	..	4,473		
	Dispensaries	..	..	..	..	..	..	..	..	..	..	..	..
	Total	..	..	..	..	..	..	125,919	..	..	27,440	..	1,486

Serial No.	Urban and rural areas.	Re-vaccinations.		Percentage of suc- cessful cases in which results were known.	Persons suc- cessfully vaccinated per mille of population.	Average annual number of persons successfully vaccinated during the previous five years.	Average annual number of deaths from small-pox during the previous five years.					
		Total number of vaccina- tions per- formed.	Successful. Unknown.									
		15	16	17	18	19	20	21	22	23	24	25
Chittagong District.												
Chittagong Cox's Bazar	..	2,034 233	429 33	336 89	95.7 100.0	21.1 14.2	46.7 23.1	1.6 ..	16.5 38.2	1,850 308	51.3 66.5	10 1
Noakhali District.												
Noakhali	..	1,249	323	475	86.2	25.9	100.8	.5.3	38.03	1,357	176.0	3
Tippera District.												
Comilla	..	513	161	43	97.8	31.4	30.5	.1	8.4	768	29.6	.2
Brahmanbaria	..	359	105	86	87.5	29.3	45.8	6.9	23.9	924	39.5	.3
Chandpur	..	675	182	176	92.3	26.9	38.2	.7	26.1	643	42.5	.1
Total of Municipalities ..	408,402	123,329	68,043	93.1	30.2	74.1	2.1	16.7	157.444	50.6	2,877	.9
Grand Total for the Presidency (Rural areas and Municipalities) ..	2,936,168	1,486,914	464,001	92.5	50.6	75.8	3.9	16.8	3,012,839	64.5	30,929	.7
Other Agencies.												
Tea-gardens	..	7,097	4,025	715	94.4	56.7	..	..	3.3	10.07	..	..
Factories	..	39,278	15,279	810	99.02	38.9	..	..	.08	2.06	..	..
Steamers	..	1,480	..	1,480	..	..	..	..	..	100	..	..
Railways	..	12,858	7,395	88	81.0	57.5	..	..	.2	.6	..	..
Jails	..	37,766	19,031	7,063	53.5	50.3	..	13.3	18.7	..	..	..
Dispensaries	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	98,479	46,730	10,156	80.3	46.4	..	5.4	10.3	..	..	..	..

Summary of vaccinations performed in the Presidency of Bengal during the year 1930-31.

STATEMENT NO. II

Showing the cost of vaccination in the Presidency of Bengal during the year 1930-31.

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Urban and rural areas.		Vaccination inspecting staff.			Vaccinators and probationers.			Establishment other than technical staff.			Total pay of establishment.			Travelling allowance.		
1	2	Number.	Pay.	Number.	Pay.	Number.	Pay.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
		3	4	5	6	7	8	9	9	9	9	9	9	9	9	9
RURAL AREAS.																
Burdwan Division.		2	1,615	6	0	36	7,184	3	0	..	8,799	9	0	2,284	1	0
Asansol	Mining Settlement	..	..	937	8	0	4,200	0	0	..	4,200	0	0	1,680	0	0
Birbhum	..	2	840	0	0	16	2,378	0	0	..	3,315	8	0	773	7	0
Bankura	..	2	1,612	9	0	43	5,246	3	0	..	6,086	3	0	427	13	0
Midnapur	..	4	840	0	0	115	11,263	0	0	..	12,975	9	0	1,236	13	0
Hooghly	..	2	1,320	0	0	31	2,968	10	0	..	3,808	10	0	400	9	0
Howrah	..	2	..	..	..	27	5,904	4	0	..	7,224	4	0	100	0	0
Presidency Division.		5	3,769	12	0	91	12,137	1	0	..	15,906	13	0	1,778	14	0
24-Parganas	..	6	2,541	0	0	51	5,064	14	0	..	7,605	14	0	1,824	6	0
Nadia	..	5	2,160	0	0	66	9,180	0	0	..	11,340	0	0	2,580	0	0
Murshidabad	..	2	840	0	0	99	9,713	1	0	..	10,553	1	0	720	0	0
Jessore	..	1	1,560	0	0	87	7,244	8	0	..	8,804	8	0	953	11	0
Rajshahi Division.		3	1,500	0	0	30	5,544	0	0	..	7,044	0	0	2,280	0	0
Rajshahi	..	3	1,500	0	0	60	5,472	7	0	..	6,972	7	0	815	16	0
Dinajpur	..	1	360	0	0	31	4,178	0	0	..	4,538	0	0	253	4	0
Jalpaiguri	..	3	1,428	15	0	16	2,955	15	0	..	4,515	15	0	3,435	4	0
Darjeeling	..	2	1,020	0	0	141	8,315	0	0	..	9,743	15	0	959	3	0
Rangpur	..	2	1,134	1	0	15	2,348	4	0	..	3,488	4	0	812	3	0
Bogra	..	2	1,020	0	0	61	5,916	10	0	..	7,050	11	0	557	3	0
Pabna	..	2	2,687	5	6	26	2,687	5	6	..	3,707	5	6	880	0	0
Malda
Dacca Division.		4	2,160	0	0	71	6,152	9	0	..	8,312	9	0	1,197	4	0
Dacca	..	6	2,814	0	0	233	23,033	10	0	..	25,847	10	0	1,028	0	0
Mymensingh	..	4	1,880	0	0	97	3,675	6	0	..	5,555	6	0	1,572	7	0
Faridpur	..	3	2,774	7	0	55	6,256	0	0	..	9,030	7	0	116	8	0

Urban and rural areas.	Expenditure.			Paid from—						Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.	
	Contingencies.			Provincial fund.			District fund.					
	10	Rs. A. P.	11	Rs. A. P.	12	Rs. A. P.	13	Rs. A. P.	14	Rs. A. P.	15	Rs. A. P.
RURAL AREAS.												
Burdwan Division.												
Burdwan	228	4 0	11,311	14 0	4,048	5 0	7,263	9 0	..	11,311	14 0	69,461
Asansol Mining Settlement	2,238	6 0	8,118	6 0	2,192	11 0	8,118	6 0	..	8,118	6 0	39,200
Birbhum	58	1 0	4,147	0 0	2,147	0 0	1,954	5 0	..	4,147	0 0	64,207
Bankura	17	14 0	6,531	14 0	2,147	0 0	4,384	14 0	..	6,531	14 0	56,664
Midnapur	523	6 0	14,735	12 0	5,764	6 0	8,971	6 0	..	14,735	12 0	222,770
Hooghly	47	11 0	4,256	14 0	1,675	9 0	2,581	5 0	..	4,256	14 0	41,253
Howrah	181	0 0	7,505	4 0	2,370	0 0	5,135	4 0	..	7,505	4 0	39,823
Presidency Division.												
24-Parganas	882	6 0	18,568	1 0	7,690	0 0	10,878	1 0	..	18,568	1 0	160,795
Nadia	141	0 0	9,571	4 0	4,239	14 0	5,331	6 0	..	9,571	4 0	78,756
Murshidabad	301	12 0	14,221	12 0	4,260	0 0	9,961	12 0	..	14,221	12 0	89,358
Jessore	165	11 0	11,438	12 0	2,760	0 0	8,678	12 0	..	11,438	12 0	210,509
Khulna	421	12 0	10,179	15 0	5,808	11 0	4,371	4 0	..	10,179	15 0	145,476
Rajshahi Division.												
Rajshahi	1,730	13 0	11,054	13 0	4,570	0 0	6,484	13 0	..	11,054	13 0	63,780
Dinajpur	1,129	12 0	7,918	2 0	4,540	15 0	3,377	3 0	..	7,918	2 0	123,683
Jalpaiguri	318	7 0	5,109	11 0	600	0 0	4,509	11 0	..	5,109	11 0	46,256
Darjeeling	70	0 0	8,021	3 0	4,014	12 0	4,006	7 0	..	8,021	3 0	11,327
Rangpur	127	9 0	10,830	11 0	4,931	11 0	5,899	0 0	..	10,830	11 0	226,605
Bogra	7	6 0	4,307	13 0	2,009	4 0	2,298	9 0	..	4,307	13 0	56,045
Pabna	421	5 0	8,029	3 0	2,863	8 0	5,165	11 0	..	8,029	3 0	81,173
Malda	65	3 0	4,652	8 6	1,900	0 0	2,752	8 6	..	4,652	8 6	29,532
Dacca Division.												
Dacca	240	4 0	9,749	13 0	4,626	0 0	5,123	13 0	..	9,749	13 0	138,851
Mymensingh	750	0 0	27,625	10 0	11,842	0 0	15,783	10 0	..	27,625	10 0	492,017
Faridpur	354	6 0	7,482	3 0	5,222	7 0	2,259	12 0	..	7,482	3 0	101,361
Bakarganj	274	4 0	9,421	3 0	4,604	7 0	4,816	12 0	..	9,421	3 0	182,815

Expenditure.													
Urban and rural areas.	Vaccination inspecting staff.			Vaccinators and probationers..			Establishment other than technical staff.			Total pay of establishment.	Travelling allowance.		
	Number.	Pay.		Number.	Pay.		Number.	Pay.					
		2	3		4	5		6	7				
Chittagong Division.													
Chittagong	3	1,552	7	0	48	5,401	14	3	..	6,954	5	3	
Noakhali	1	533	4	0	52	4,980	0	0	..	5,513	4	0	
Tippera	3	1,200	0	0	202	9,817	6	0	..	11,017	6	0	
Chittagong Hill Tracts	3	1,680	0	0	11	1,506	12	0	..	3,186	12	0	
Total of the Rural Areas	79	42,153	5	0	1,825	1,80,824	14	9	1	120	0	0	
MUNICIPALITIES.													
Burdwan District.													
Burdwan	..	..	..	..	3	684	0	0	..	196	0	0
Kalna	..	..	..	..	1	121	0	0	..	121	0	0
Katwa	..	..	..	..	1	96	0	0	..	96	0	0
Dainhat	..	..	..	..	1	365	10	0	..	365	10	0
Raniganj	..	..	..	..	2	296	0	0	..	296	0	0
Asansol	..	..	..	..	..	..	..	..	..	..	..	..
Birbhum District.	..	..	..	..	1	140	13	3	..	140	13	3
Suri	..	..	..	..	..	..	..	..	..	..	..	..
Bankura District.													
Bankura	..	..	..	..	2	289	6	0	..	289	6	0
Vishnupur	..	..	..	..	7*	422	0	0	..	422	0	0
Sonamukhi	..	..	..	..	2	144	8	0	..	144	8	0
Midnapur District.	..	..	..	..	..	..	..	..	..	..	..	..
Midnapur	..	..	..	..	2	320	7	9	..	320	7	9
Ghatal	..	..	..	..	1	180	0	0	..	180	0	0
Kharar	..	..	..	..	1	67	4	0	..	67	4	0
Chandrakona	..	..	..	..	1	33	14	0	..	33	14	0
Ramjibampur	..	..	..	..	1	65	0	0	..	65	0	0
Khirpai	..	..	..	..	1	30	0	0	..	30	0	0
Tamluk	..	..	..	..	2	244	12	6	..	244	12	6

* One permanent and 6 temporary.

Urban and rural areas.	Expenditure.			Paid from—						Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.			
	Contingencies.		Total cost.	Rs. A. P.	Provincial fund.			District fund.	Municipal fund.	Total.				
	Rs. A. P.	Rs. A. P.	10	11	12	13	14	15	16	17				
Chittagong Division.														
Chittagong	226	12	9	8,078	4	0	3,149	9	0	8,078	4	0
Noakhali	10	15	0	5,794	3	0	1,820	0	0	5,794	3	0
Tippera	539	2	0	12,298	8	0	4,892	0	0	12,298	8	0
Chittagong Hill Tracts	126	0	0	5,545	4	0	5,545	4	0	5,545	4	0
Total of the Rural Areas	10,599	5	9	2,66,505	12	6	1,10,088	5	0	1,56,417	7	6
MUNICIPALITIES.														
Burdwan District.														
Burdwan	146	0	0	990	0	0	..	..	990	0	0	
Kalna	196	0	0	..	..	196	0	0	
Katwa	121	0	0	..	..	121	0	0	
Dainhat	96	0	0	..	..	96	0	0	
Raniganj	498	10	0	..	..	498	10	0	
Asansol	356	0	0	..	..	356	0	0	
Suri	
Birbhum District.	6	2	0	146	15	3	..	..	146	15	3	
Bankura District.	2	5	0	351	11	0	..	..	351	11	0	
Bankura	422	0	0	..	..	422	0	0	
Vishnupur	201	0	0	..	..	201	0	0	
Sonamukhi	
Midnapur District.														
Midnapur	320	7	9	
Ghatal	189	4	0	
Kharar	68	9	0	
Chandrakona	35	8	0	
Ramjibampur	67	8	0	
Khirpal	30	0	0	
Tamluk	278	0	6	

Urban and rural areas.		Vaccination inspecting staff.				Vaccinators and probationers.				Establishment other than technical staff.				Total pay of establishment.		Travelling allowance.	
1	2	Number.	Pay.	Number.	Pay.	Number.	Pay.	Number.	Pay.	Number.	Pay.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	9	
Hooghly District.																	
Hooghly-Chinsura	530	0	0	..	..	..	530	0	0	..	27	15 0
Bansberia	202	0	0	..	..	..	202	0	0	..	..	..
Arambagh	164	0	0	..	..	..	164	0	0	..	..	..
Serampur	653	8	0	..	..	..	653	8	0	..	..	..
Rishra-Konnagar	276	0	0	..	..	..	276	0	0	..	..	..
Uttarpurba	198	0	0	..	..	..	198	0	0	..	..	..
Kotrung	157	0	0	..	..	..	157	0	0	..	..	..
Baidyabati	192	0	0	..	..	..	192	0	0	..	..	..
Bhadreswar	312	0	0	..	..	..	312	0	0	..	..	..
Champdani	270	0	0	..	..	..	270	0	0	..	..	..
Howrah District.		1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Howrah	5,816	2	0	1	..	..	180	0	0	..	120	0 0
Bally	300	0	0	..	..	..	300	0	0	..	..	..
24-Parganas District.																	
South Suburban	432	0	0	..	..	..	660	0	0	..	..	..
Tollyganj	624	0	0	..	..	..	624	0	0	..	..	..
Budge-Budge	235	13	0	..	..	..	235	13	0	..	..	..
Baranagar	1,077	0	0	..	..	..	1,077	0	0	..	..	..
Kamahati	1,324	0	0	..	..	..	1,324	0	0	..	..	..
Rajpur	90	0	0	..	..	..	90	0	0	..	..	..
Baruipur	54	15	0	..	..	..	54	15	0	..	..	..
Jaynagar	90	0	0	..	..	..	90	0	0	..	..	..
North Dum Dum	51	0	0	..	..	..	51	0	0	..	..	..
Dum Dum	71	0	0	..	..	..	71	0	0	..	..	..
South Dum Dum	300	0	0	..	..	..	300	0	0	..	..	..
Khardah	228	4	0	..	..	..	228	4	0	..	..	..
Barrackpur	360	0	0	..	..	..	360	0	0	..	..	..
Panihati	192	0	0	..	..	..	192	0	0	..	..	..
North Barrackpur	300	0	0	..	..	..	300	0	0	..	..	..
Titagarh	536	11	0	..	..	..	536	11	0	..	..	..
Garulia	240	0	0	..	..	..	240	0	0	..	..	..
Naihati	462	0	0	..	..	..	462	0	0	..	..	..
Halisahar	216	0	0	..	..	..	216	0	0	..	..	..
Kanchrapara	251	0	0	..	..	..	251	0	0	..	..	..
Bhatpara	737	0	0	..	..	..	737	0	0	..	..	..
Barasat	90	0	0	..	..	..	90	0	0	..	..	..

Expenditure.	Paid from—										Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.
	Contingencies.			Provincial fund.			District fund.			Municipal fund.		
	10	11	Rs. A. P.	12	13	Rs. A. P.	14	15	Rs. A. P.	16	17	
Hooghly District.												
Hooghly-Chinsura	530	0	..	530	0	..	8,090	0	0
Bansberia	231	7	0	231	7	0	4,424	0	8
Arambagh	177	11	0	177	11	0	443	0	5
Serampur	662	6	0	662	6	0	2,783	0	9
Rishra-Konnagar	340	0	0	340	0	0	3,147	0	8
Uttarparsa	198	0	0	198	0	0	328	0	7
Kotrung	157	0	0	157	0	0	154	1	3
Baidyabati	192	0	0	192	0	0	1,406	0	2
Bhadreswar	332	6	0	332	6	0	851	0	2
Champdani	273	0	0	273	0	0	855	0	1
Howrah District.	12,054	0	2
Howrah	6,956	2	0	6,956	2	0	1,091	0	5
Bally	300	11	0	300	11	0	..	..	..
24-Parganas District.												
South Suburban	673	6	0	673	6	0	1,372	0	10
Tollyganj	686	9	0	686	9	0	1,025	0	8
Budge-Budge	237	1	0	237	1	0	1,873	0	11
Baranagar	1,118	2	0	1,118	2	0	3,427	0	2
Kamarhati	336	7	0	336	7	0	910	0	11
Rajpur	91	8	0	91	8	0	360	0	4
Baripur	54	15	0	54	15	0	457	0	0
Jaynagar	90	0	0	90	0	0	190	0	7
North Dum Dum	51	13	0	51	13	0	222	0	8
Dum Dum	104	12	0	104	12	0	2,171	0	9
South Dum Dum	301	1	0	301	1	0	4,59	0	5
Khardah	230	8	0	230	8	0	231	0	11
Barrackpur	360	0	0	360	0	0	574	0	0
Panihati	195	0	0	195	0	0	650	0	9
North Barrackpur	305	0	0	305	0	0	565	0	7
Tritagarh	537	7	0	537	7	0	903	0	6
Garulia	241	0	0	241	0	0	3,170	0	2
Naihati	487	0	0	487	0	0	2,662	0	11
Halisahar	218	0	0	218	0	0	4,64	0	6
Kanchrapara	251	0	0	251	0	0	4,57	0	9
Bhatpara	769	0	0	769	0	0	3,929	0	1
Barasat	90	0	0	90	0	0	501	0	10

Expenditure.	Urban and rural areas.		Vaccination inspecting staff.		Vaccinators and probationers.		Establishment other than technical staff.		Total pay of establishment.		Travelling allowance.	
	Number.	Pay.	Number.	Pay.	Number.	Pay.	Number.	Pay.	Number.	Pay.	Number.	Pay.
24-Parganas District.												
Gobardanga	1	79	..	..	79	8	..	..
Basirhat	1	288	0	..	288	0	..	..
Baduria	1	228	4	..	228	4	..	..
Taki	1	77	13	0	77	13	0	..
Calcutta	18	28,000	0	0	60	46,500	0	0	5,700	0
Nadia District.												
Krishnagar	3	672	0	..	672	0	..	..
Nabadwip	1	259	2	..	259	2	..	..
Ranaghat	1	228	0	..	228	0	..	..
Birnagar	1	100	0	..	100	0	..	..
Santipur	2	272	0	..	272	0	..	..
Chakdah	1	20	0	..	20	0	..	..
Kushtia	1	277	1	0	277	1	0	..
Kumarkhali	1	80	0	..	80	0	..	..
Meherpur	1	34	0	..	34	0	..	..
Murshidabad District.												
Berhampur	2	515	14	0	515	14	0	24
Murshidabad	1	156	0	..	156	0	..	..
Jiaganj-Azimganj	1	180	0	..	180	0	..	..
Kandi	1	150	0	..	150	0	..	..
Jangipur	1	192	0	..	192	0	..	..
Dhulian	1	150	0	..	150	0	..	..
Jessore District.												
Jessore	1	180	0	..	180	0	..	..
Kotchandpur	1	90	0	..	90	0	..	..
Maheshpur	1	24	0	..	24	0	..	..
Khulna District.												
Khulna	1	274	8	0	274	8	0	..
Satkira	1	48	0	..	48	0	..	..
Debhata	1	32	14	0	32	14	0	..
Rajshahi District.												
Rajshahi		424	14	0	424	14	0	..
Nator		228	0	..	228	0	..	..

Urban and rural areas.	Contingencies.	Total cost.	Provincial fund.	District fund.	Municipal fund.	Total.	15	16	17	Paid from—		Number of successful vaccinations and re-vaccinations.	Average cost of each successful case.
										Rs.	A.		
										10	11		
24-Parganas District.													
Gohardanga	3 12 0	83 4 0	..	..	83 4 0	83 4 0	..	85	0 15 8		
Basirhat	8 3 0	296 3 0	..	..	296 3 0	296 3 0	..	535	0 8 10		
Baduria	2 0 0	230 4 0	..	..	230 4 0	230 4 0	..	531	0 6 11		
Taki	4 10 0	82 7 0	..	..	82 7 0	82 7 0	..	627	0 2 1		
Calcutta	3,600 0 0	85,780 0 0	..	..	85,780 0 0	85,780 0 0	..	95,001	0 14 2		
Nadia District.													
Krishnagar	0 10 0	672 0 0	..	..	672 0 0	672 0 0	..	3,316	0 3 2		
Nabadwip	8 5 0	259 12 0	..	..	259 12 0	259 12 0	..	664	0 6 3		
Ranaghat	2 3 0	236 5 0	..	..	236 5 0	236 5 0	..	608	0 6 2		
Birnagar	3 7 0	103 7 0	..	..	103 7 0	103 7 0	..	207	0 7 11		
Santipur	109 0 0	381 0 0	..	..	381 0 0	381 0 0	..	884	0 6 10		
Chakdah	5 0 0	25 0 0	..	..	25 0 0	25 0 0	..	162	0 2 5		
Kushtia	7 12 0	284 13 0	..	..	284 13 0	284 13 0	..	265	1 1 2		
Kumarkhali	3 0 0	83 0 0	..	..	83 0 0	83 0 0	..	370	0 3 7		
Meherpur	34 0 0	..	..	34 0 0	34 0 0	..	192	0 2 10		
Murshidabad District.													
Berhampur	562 14 0	..	..	..	562 14 0	562 14 0	..	888	0 10 1		
Murshidabad	156 0 0	..	..	..	156 0 0	156 0 0	..	308	0 8 1		
Jiaganj-Azimganj	0 9 0	180 9 0	..	..	180 9 0	180 9 0	..	542	0 5 3		
Kandi	3 0 0	153 0 0	..	..	153 0 0	153 0 0	..	504	0 4 10		
Jangipur	1 6 9	193 6 9	..	..	193 6 9	193 6 9	..	279	0 11 1		
Dhulian	3 9 0	153 9 0	..	..	153 9 0	153 9 0	..	360	0 6 9		
Jessore District.													
Jessore	8 15 0	188 15 0	..	..	188 15 0	188 15 0	..	337	0 8 11		
Kotchandpur	1 0 0	91 0 0	..	..	91 0 0	91 0 0	..	477	0 3 0		
Maheshpur	24 0 0	..	..	24 0 0	24 0 0	..	98	0 4 0		
Khulna District.													
Khulna	539	0 8 1		
Satkhra	208	0 3 8		
Debhata	248	0 2 2		
Rajshahi District.													
Rajshahi	9 4 0	494 2 0	..	..	494 2 0	494 2 0	..	1,513	0 5 2		
Nator	18 3 0	246 3 0	..	..	246 3 0	246 3 0	..	149	1 10 5		

Expenditure.

Urban and rural areas	Vaccination inspecting staff.		Vaccinators and probationers.		Establishment other than technical staff.		Total pay of establishment.		Travelling allowance.	
	Number.	Pay.	Number.	Pay.	Number.	Pay.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	2	3	4	5	6	7	8	9	8	9
Dinajpur District.										
Dinajpur	240	0	0	240	0	0	60 0 0
Jalpaiguri District.										
Jalpaiguri	240	0	0	240	0	0	36 0 0
Darjeeling District.										
Darjeeling	484	1	0	197	10	0	167 12 0
Kurseong	420	0	0	..	..	..	97 8 0
Rangpur District.										
Rangpur	545	14	0	..	..	..	165 0 0
Gaibandha	20	0	0	20	0	0	..
Bogra District.										
Bogra	173	0	0	..	..	..	..
Sherpur	88	0	0	..	..	..	..
Pabna District.										
Pabna	227	0	0	..	..	..	..
Sirajganj	478	0	0	478	0	0	..
Malda District.										
English Bazaar	300	0	0	300	0	0	..
Malda	16	4	0	16	4	0	..
Nawabganj	204	0	0	204	0	0	..
Dacca District.										
Dacca	2,211	0	0	2,211	0	0	60 0 0
Narayanganj	578	0	0	578	0	0	..
Mymensingh District.										
Mymensingh	371	2	0	371	2	0	19 11 0
Muktagacha	185	6	0	185	6	0	..
Netrakona	240	0	0	240	0	0	..
Jamaipur	204	0	0	204	0	0	4 0 0
Sherpur	156	0	0	156	0	0	..
Kishorganj	183	0	0	183	0	0	..
Bajitpur	54	8	0	54	8	0	..
Tangail	204	0	0	204	0	0	..
Gauripur	50	13	0	50	13	0	..

Expenditure.	Paid from—										Average cost of each successful case.	
	Contingencies.		Total cost.		Provincial fund.		District fund.		Municipal fund.			
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
Urban and rural areas.												
Dinajpur District.												
Dinajpur	21 3 0	321 3 0	..	..	321 3 0	321 3 0	771	0 6 7		
Jalpaiguri District.												
Jalpaiguri	276 0 0	..	..	276 0 0	276 0 0	1,135	0 3 10		
Darjeeling District.												
Darjeeling	33 8 3	882 15 3	..	..	882 15 3	882 15 3	2,022	0 6 11		
Kurseong	60 0 0	577 8 0	..	..	577 8 0	577 8 0	765	0 12 0		
Rangpur District.												
Rangpur	19 13 0	730 11 0	..	..	730 11 0	730 11 0	708	1 0 6		
Gaibandha	7 8 0	27 8 0	..	..	27 8 0	27 8 0	328	0 1 4		
Bogra District.												
Bogra	173 0 0	..	..	173 0 0	173 0 0	644	0 4 3		
Sherpur	90 0 0	..	..	90 0 0	90 0 0	143	0 10 0		
Pabna District.												
Pabna	227 0 0	..	..	227 0 0	227 0 0	1,923	0 1 10		
Sirajganj	478 0 0	..	..	478 0 0	478 0 0	1,875	0 4 0		
Maldia District.												
English Bazar	307 12 0	..	..	307 12 0	307 12 0	884	0 5 6		
Maldia	16 11 0	..	..	16 11 0	16 11 0	32	0 8 4		
Nawabganj	207 5 0	..	..	207 5 0	207 5 0	492	0 6 8		
Dacca District.												
Dacca	152 0 0	2,729 0 0	..	..	2,729 0 0	2,729 0 0	7,831	0 5 11		
Narayanganj	111 3 6	689 3 6	..	..	689 3 6	689 3 6	2,056	0 5 4		
Mymensingh District.												
Mymensingh	387	0 1 4		
Muktgaracha	242	0 12 5		
Netrakona	284	0 13 6		
Jamalpur	817	0 4 0		
Kishorganj	562	0 4 5		
Bajitpur	494	0 6 5		
Fangail	120	0 7 3		
Gauripur	484	0 6 8		
	863	0 1 1		
	61 13 0			

Expenditure.

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Urban and rural areas.	Vaccination inspecting staff.			Vaccinators and probationers.			Establishment other than technical staff.			Total pay of establishment.			Travelling allowance.				
	Number.	Pay.	Number.	Pay.	Number.	Pay.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14				
Faridpur District.																	
Faridpur ..	..	..	..	..	1	360	0	0	360	0	0	30	0
Madaripur ..	..	..	..	..	1	252	0	0	252	0	0	..	..		
Rajbari ..	..	..	..	..	1	240	0	0	240	0	0	..	..		
Bakarganj District.																	
Barisal ..	..	..	..	..	1	227	0	0	227	0	0	60	0
Jhalakati ..	..	..	..	..	1	180	0	0	180	0	0	..	..		
Nalchiti ..	..	..	..	..	1	15	2	0	5	2	0	..	..		
Pirojpur ..	..	..	..	..	1	160	0	0	160	0	0	..	..		
Patuakhali ..	..	..	..	..	1	204	0	0	204	0	0	..	..		
Bhola ..	..	..	..	..	1	227	0	0	227	0	0	60	0
Chittagong District.																	
Chittagong ..	..	..	..	..	2	660	0	0	144	0	0	804	0
Cox's Bazar ..	..	..	..	..	1	98	0	0	98	0	0	..	..		
Noakhali District.																	
Noakhali ..	..	..	..	..	2	288	0	0	288	0	0	..	..		
Tippera District.																	
Comilla ..	..	..	..	..	1	300	0	0	300	0	0	60	0
Brahmanbaria ..	..	..	..	..	1	360	0	0	360	0	0	..	..		
Chandpur ..	..	..	..	..	1	240	0	0	240	0	0	0	0
Total of the towns.	21	29,374	0	0	234	83,102	0	6	33	6,221	10	6	3,507	7	0		
Provincial Vaccine Depot					1	6,600	0	0	7	5,649	7	0	2,210	3	0		
Calcutta Corporation		Vaccine			1	4,100	0	0	5	14,459	10	0	14,459	10	0		
Depot	3*	20,100	0	0	2,000	0	0		
Vaccination Bureau		
Tea Gardens		
Factories		
Steamers		
Railways		
Jails		
Dispensaries		
Grand Total ..	95	1,02,327	5	0	2,066	2,71,576	6	3	39	8,551	13	0	3,82,455	8	3		
															37,241	10	9

*One Assistant Director of Public Health in charge of vaccination and vital statistics and two Special Inspectors of Vaccination.

Urban and rural areas.	Expenditure.										Paid from—					Average cost of each successful case.		
	Contingencies.			Total cost.			Provincial fund.			District fund.		Municipal fund.		Total.				
	10	11	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	14	15	Rs. A. P.	Rs. A. P.	16	17			
Faridpur District.																		
Faridpur	390	0	0	..	..	390	0	0	390	0		
Madaripur	252	0	0	..	..	252	0	0	252	0		
Rajbari	242	10	0	..	..	242	10	0	242	10		
Bakarganj District.																		
Barisal	58	0	0	345	0	345	0	0	345	0		
Jhalakati	10	0	0	190	0	190	0	0	190	0		
Nalchiti	5	2	0	5	2		
Pirojpur	3	13	6	163	13	163	13	6	163	13		
Patuakhali	2	11	0	206	11	206	11	0	206	11		
Bhola	50	0	0	337	0	337	0	0	337	0		
Chittagong District.																		
Chittagong	18	14	0	822	14	822	14	0	822	14		
Cox's Bazar	5	0	0	103	0	103	0	0	103	0		
Noakhali District.																		
Noakhali	8	4	0	296	4	296	4	0	296	4		
Tippera District.																		
Comilla	20	0	0	380	0	380	0	0	380	0		
Brahmanbaria	26	5	0	386	5	386	5	0	386	5		
Chandpur	240	5	240	5	0	240	5		
Total of the towns							5,030	8	0	1,27,235	9	6	1,27,235	9	6	230,667	0	
Provincial Vaccine Depot	44,839	4	10	59,315	2	10	59,315	2	10	59,315	2	
Calcutta Corporation	4,000	0	0	10,100	0	10,100	0	0	10,100	0		
Vaccination Bureau	21,009	12	21,009	12	9	21,009	12		
Tea Gardens		
Factories		
Steamers		
Railways		
Jails		
Dispensaries		
Grand Total	..	64,469	2	7	4,84,166	5	7	1,90,413	4	7	1,56,417	7	6	1,37,335	9	6	4,84,166	5
																	3,609,675	0
																	0	2

STATEMENT No. III

Showing the total number of persons vaccinated with the number of those persons who were successfully vaccinated during the last ten years.

Persons vaccinated.

Persons vaccinated.

1926-27.		1927-28.		1928-29.		1929-30.		1930-31.	
Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
I. Government staff	9,984	7,656	9,734	7,176	19,604	13,677	18,510	13,992	14,000
II. District Boards	..	2,792,949	2,228,781	3,589,713	2,701,154	4,842,438	3,508,399	4,974,545	4,617,578
III. Municipalities	..	377,184	175,648	262,585	130,869	296,973	143,218	410,690	3618,352
IV. Tea-Gardens, Factories, Steamers, Railways, Jails and Dispensaries	..	96,858	46,115	107,335	67,765	117,389	64,893	125,393	172,926
V. Public Vaccinators
Total	..	3,276,975	2,458,200	3,969,367	2,906,964	5,276,404	3,730,187	5,529,138	3,872,343
Primary vaccinations	..	1,740,309	1,657,657	1,925,601	1,814,715	2,048,775	1,896,877	2,303,797	2,149,944
Percentage of the total	..	53.1	67.4	48.5	62.2	38.8	50.8	41.6	55.5
Re-vaccinations	..	1,536,666	800,543	2,043,766	1,092,249	3,227,629	1,833,310	3,225,341	1,722,399
Percentage of the total	..	46.9	32.6	51.5	37.8	61.2	49.2	58.3	44.5

STATEMENT No. IV

Showing particulars of vaccination verified by the Inspecting Officers during the year 1930-31.

Serial No.	Districts.	Total number of persons vaccinated.										Total number inspected					Percentage of		
		By District Health Officers.*					By Rural Inspecting Health Staff.					By Municipal Superintendents and Assistant Superintendents of Vaccination.					By District Health Officers.		
		Primary. Total.	Re-vacci. nation.	Total.	Primary. Total.	Re-vacci. nation.	Total.	Primary. Total.	Re-vacci. nation.	Total.	Primary. Total.	Re-vacci. nation.	Total.	Primary. Total.	Re-vacci. nation.	Total.	17		
1	Burdwan Division.	66,686	94,162	160,848	11,979	18,277	47,374	51,981	99,355	254	6,585	19,1	7,5	12.5					
2	Burdwan	..	50,782	91,662	6,298	2,014	5,733	2,747	108	153	..	..	..	.4			
3	Birbhum	..	54,113	100,931	11,112	1,538	2,765	431	749	8,121	10,398	3,1	4,8	3.8					
4	Bankura	..	115,825	208,462	324,287	1,082	1,525	32,802	43,138	75,940	2,277	550	9	..	.5				
5	Midnapur	..	45,347	82,680	3,001	4,261	7,862	14,367	12,039	26,406	4,617	11,208	15,825	10,9	21.2	15.2			
6	Hooghly ..	..	33,544	66,864	100,408	1,987	658	2,645	15,540	4,340	19,880	761	575	1,336	7.5	2.4	4.9	
7	Howrah ..	..	33,544	66,864	100,408	1,987	658	2,645	15,540	4,340	19,880	761	575	1,336	7.5	2.4	4.9	
8	Presidency Division.	..	131,160	126,074	257,234	426	296	722	38,206	21,476	59,682	6,462	24,206	9,135	15,597	..			
9	24-Parganas	..	36,918	233,155	270,073	1,181	140	..	321	17,821	9,891	27,712	1,079	97,082	121,288	..	.3		
10	Calcutta	..	58,840	48,273	107,113	..	..	..	587	39,582	31,916	71,498	1,350	2,429	..	..	..
11	Nadia ..	..	59,594	77,130	136,724	245	342	..	148	26,921	20,042	46,963	1,918	1,051	1,969	..	.4	
12	Murshidabad ..	..	92,170	238,334	330,504	66	82	..	1,044	15,287	33,865	49,152	119	146	265	..	.04	
13	Jessore ..	..	46,876	207,513	254,389	166	878	..	..	..	..	..	365	497	..	..	.4
14	Khulna ..	..	207,513	254,389	41,994	41,234	83,228	1,267	215	1,482	22,428	12,394	34,822	659	141	800	..	
15	Raijhali Division.	..	92,302	57,889	150,191	2,835	1,672	4,507	38,645	19,699	58,344	147	465	612	3,1	..			
16	26,725	..	48,058	74,783	26,020	524	732	1,256	322	642	964	360	425	785	2,0	..			
17	9,516	..	16,504	16,504	103,176	205,505	308,681	7,750	3,372	11,122	25,068	4,362	12,668	234	450	684	..		
18	Rangpur	47,019	49,470	96,489	11,122	11,122	44,637	69,705	221	270	491	7.6	3.6	
19	Bohra ..	..	67,880	50,814	118,694	308	140	..	448	16,123	8,703	20,584	155	425	580	..	..
20	Pabna ..	..	30,492	14,834	45,326	1,147	422	1,569	1,715	4,141	5,856	1,537	7,317	23,440	918	2,455	..	
21	Malda ..	..	30,492	14,834	41,994	41,234	83,228	1,267	215	1,482	22,428	12,394	34,822	659	141	800	..	
22	Dacca Division.	..	114,338	106,841	221,179	134	154	288	54,555	28,346	82,901	1,110	1,497	2,607	..	.2	.1		
23	Mymensingh ..	..	345,134	342,114	687,248	721	309	1,030	69,337	50,213	119,550	1,679	806	1,485	..	.1	.1	
24	Faridpur ..	..	70,565	96,654	167,219	247	207	454	31,644	17,847	49,491	973	431	1,404	..	.3	.3	
25	Bakarganj ..	..	161,508	55,450	216,958	513	142	655	63,773	12,988	76,761	736	1,376	2,112	..	..	
26	Chittagong Division.	..	69,315	62,821	132,136	4,020	795	4,815	25,250	11,350	36,600	203	236	439	..				
27	Noakhali ..	..	103,890	127,922	231,812	2,455	197	2,652	65,131	20,426	85,557	310	265	575	..			
28	Tippera	168,329	241,948	410,277	558	578	..	1,136	26,757	23,689	50,446	1,106	290	1,396	..	2.4	1.2	
29	Chittagong Hill Tracts Railways, steamers, factories, dispensaries and tea gardens.	..	8,341	5,659	14,000	79,795	60,713	..	4,441	2,510	6,951	..	..	..	..	..	..
	Total ..	..	2,246,250	3,034,639	5,280,889	42,951	24,136	67,087	715,721	138,241	55,822	1,215,155	499,434	194,063	1.9	.8	1.2	

* Civil Surgeons of Darjeeling and the Chittagong Hill Tracts.

Serial No.	Districts.	Percentage of cases found successful to total number inspected.												Percentage of success as reported by vaccinators.					
		By Municipal Superin- tendents and Assistant Superintendents of Vaccination.						By District Health Officers.											
		By Primary. Re-vacci- nation.			By Total. Primary. Re-vacci- nation.			By Primary. Re-vacci- nation.			By Total. Primary. Re-vacci- nation.								
1	2	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
1	Burdwan Division.	75.5	62.0	67.8	161.0	2.6	43.7	98.5	70.0	88.7	97.4	61.3	78.5	18.3	55.1	19.7	95.6	56.3	
2	Birbhum	4.9	1.5	3.0	43.7	38.0	39.5	61.6	91.7	82.8	97.3	75.7	91.5	100.0	44.4	60.7	96.2	50.04	
3	Bankura	1.1	2.3	1.6	32.4	37.1	35.9	97.8	67.2	80.8	100	81.8	88.5	98.4	29.7	44.9	98.2	54.5	
4	Midnapur	29.0	21.6	24.3	10.1	13.6	12.4	98.3	79.7	92.9	95.8	65.9	95.0	40.9	55.3	97.3	56.4		
5	Hooghly ..	52.3	59.8	55.5	46.8	47.3	47.2	95.5	74.3	83.0	82.0	65.1	74.3	99.3	47.1	62.3	96.1	73.7	
6	Howrah ..	58.9	15.9	37.0	10.6	1.8	3.5	99.5	41.3	84.8	99.4	52.8	89.3	96.8	28.6	67.5	99.4	49.7	
7	Presidency Division.	33.1	22.5	28.3	41.3	32.9	35.9	94.1	50.7	76.3	95.4	50.6	79.3	77.2	47.1	59.6	94.9	53.6	
8	24-Parganas	32.3	23.9	28.7	33.7	19.7	24.1	97.2	63.6	82.5	97.3	62.3	84.8	88.4	49.8	33.05	96.3	61.8	
9	Calcutta	69.1	43.1	54.5	39.5	41.1	40.3	95.1	100	97.9	96.5	76.6	87.6	91.3	28.7	57.9	94.5	47.7	
10	Nadia	29.4	8.4	14.3	35.3	14.08	19.2	100	71.9	84.4	97.9	57.1	80.5	100.0	45.8	70.1	95.6	51.7	
11	Murshidabad	16.5	16.5	19.6	17.8	18.7	18.4	98.2	26.1	38.0	98.7	53.3	67.4	95.4	9.04	31.9	99.8	48.6	
12	Jessore ..	33.1	29.4	41.3	14.3	35.3	14.08	19.2	100	71.9	84.4	97.9	53.3	67.4	95.4	9.04	31.9	99.8	48.6
13	Rajshahi Division.	55.3	32.5	44.2	51.8	9.5	29.1	99.4	81.4	96.8	98.7	72.4	89.3	100.0	26.2	87.0	99.1	61.8	
14	Rajshahi	42.0	35.6	39.6	39.6	41.5	41.0	94.6	87.6	92.0	85.1	64.4	78.1	97.2	32.6	48.2	92.3	70.1	
15	Dinajpur	1.2	1.4	1.3	50.5	28.7	35.8	85.1	47.7	63.3	92.8	53.2	71.4	25.1	40.3	92.4	48.4
16	Jalpaiguri	98.0	51.8	72.7	22.5	59.9	79.9	..	..	..	98.9	33.5	76.4	97.8	23.3	48.8	95.3	36.3
17	Darjeeling	24.7	21.9	22.9	39.4	26.8	31.3	98.5	74.4	91.2	89.4	67.1	75.1	99.5	35.1	64.1	90.02	66.5	
18	Bangpur	25.6	18.5	22.0	26.9	33.2	31.2	..	..	..	86.5	41.4	67.4	99.4	4.7	30.0	87.2	33.09
19	Bogra ..	24.9	15.1	20.7	48.0	48.0	48.0	97.7	62.9	86.8	93.5	49.6	79.8	98.2	40.7	76.7	92.2	44.6	
20	Pabna ..	5.8	32.4	13.8	31.3	30.8	31.09	92.2	60.9	83.8	98.1	73.6	80.8	71.4	67.4	69.2	81.9	41.2	
21	Dacca Division.	50.7	31.4	41.9	16.6	10.6	12.5	100	100	100	93.0	53.9	79.6	97.6	31.4	59.5	91.4	44.9	
22	Dacca ..	20.5	14.9	17.7	19.9	18.3	19.0	93.9	43.4	78.7	86.1	51.2	71.4	93.1	37.3	62.8	86.2	59.7	
23	Mymensingh	45.8	18.8	30.2	66.1	32.9	50.5	96.4	70.5	84.6	94.2	54.7	80.0	100.0	10.2	72.4	93.9	38.6	
24	Faridpur	39.8	25.4	36.4	54.0	69.6	63.2	92.6	80.3	89.9	96.2	66.3	91.1	94.5	21.8	47.1	93.7	64.09	
25	Chittagong Division.	37.2	19.1	28.7	14.6	10.4	12.0	94.4	53.5	87.6	94.4	43.6	78.7	100.0	30.08	62.4	92.8	30.6	
26	Chittagong	63.0	16.3	37.4	58.7	21.2	32.3	95.0	58.4	92.3	98.2	94.2	80.0	93.2	58.8	77.3	89.7	34.7	
27	Noakhali	16.3	9.8	12.5	50.8	18.7	37.5	100.4	57.6	78.4	94.4	63.0	87.4	79.6	30.3	75.5	93.6	65.5	
28	Tippera	53.2	44.3	49.6	..	..	..	..	..	..	..	..	..	..	..	..	..	..
29	Chittagong Hill Tracts Railways, steamers, factories, dispensaries and tea gardens.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total	31.8	16.4	23.01	2.4	4.5	3.7	96.9	68.8	86.8	93.8	60.9	80.3	86.1	34.9	49.6	92.4	50.5	

STATEMENT No. V.

Showing, side by side, the ratios per mille of population of deaths from small-pox and the number of successful vaccinations during the ten years ending 1930-31.

Districts.	Ratio of deaths from small-pox.	Number of successful vaccinations.	1921-22.		1922-23.		1923-24.		1924-25.		1925-26.	
			5	6	7	8	9	10	11	12	13	14
Burdwan :	.08	77,293	.07	61,625	70,268	.52	92,481	1.00	141,733			
Birbhum :	.05	11,370	.07	20,915	.03	22,776	.11	45,598	1.00	41,778		
Bankura :	.01	48,368	.05	49,218	.03	44,891	.18	46,361	.58	61,252		
Midnapur :	.21	96,661	.33	128,029	.09	112,358	.17	121,207	.59	143,575		
Hooghly :	.07	34,270	.09	33,912	.06	30,468	.39	41,717	.95	41,794		
Howrah :	.29	29,625	.24	24,526	.06	36,726	.63	41,989	2.00	42,875		
24-Parganas :	.08	72,708	.12	90,323	.11	99,751	.70	110,916	.86	127,161		
Calcutta :	.34	42,695	.35	28,617	.06	20,251	2.51	106,242	1.76	56,042		
Nadia :	.04	46,020	.05	58,850	.02	50,646	.05	61,166	.20	68,619		
Murshidabad :	.40	34,568	.16	43,769	.04	45,464	.03	46,712	.75	77,366		
Jessore :	.09	61,592	.04	63,118	.01	53,295	.05	66,202	.20	66,033		
Khulna :	.009	64,244	.01	62,904	.009	50,529	.03	71,232	.05	63,337		
Rajshahi :	.04	53,797	.04	63,648	.07	52,187	.04	72,171	.04	73,334		
Dinajpur :	.28	82,359	.05	82,457	.008	75,006	.04	71,440	.22	89,749		
Jalpaiguri :	.44	24,962	1.36	34,671	.51	31,602	.28	31,051	.02	33,602		
Darjeeling :	.00	15,935	..	15,763	.01	16,320	.01	13,500	.07	23,828		
Rangpur :	.31	31,626	.09	71,797	.009	75,398	.04	54,223	.24	82,748		
Bogra :	.05	25,169	.005	22,621	.02	33,876	.41	31,746	.55	34,791		
Pabna :	.02	28,651	.002	48,745	.01	28,831	.04	44,559	.48	54,870		
Malda :	.12	37,844	.09	45,506	.04	38,308	.18	57,821	.19	52,534		
Dacca :	.24	71,139	.29	97,044	.22	101,516	.17	127,336	.24	140,485		
Mymensingh :	.23	153,123	.22	203,223	.10	251,904	.14	271,481	.13	336,229		
Faridpur :	.06	59,390	.01	48,354	.007	41,167	.03	50,604	1.08	73,338		
Bakarganj :	.01	54,754	.006	58,875	.004	69,415	.02	93,922	1.03	98,943		
Chittagong :	.27	59,571	.53	65,560	.47	81,266	.27	80,827	.31	88,071		
Noakhali :	.02	44,168	.09	49,711	.03	63,175	.06	69,357	.24	89,585		
Tippera :	.08	138,223	.04	147,535	.02	156,062	.06	135,725	.10	144,795		
Chittagong Hill Tracts :	..	7,731	Not under registration.	8,522	6,790	Not under registration.	..	8,309	10,099	10,099		
Dispensary, Railway, Tea Garden and Factory Vaccinations.	..	9,366	..	8,548	39,681	30,438	..	..	..	37,127		
Total	..	1,516,502	.16	1,738,386	.08	1,790,927	.22	2,096,383	.4	2,395,739		

Districts.	1926-27.			1927-28.			1928-29.			1929-30.			1930-31.		
	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	
Burdwan ..	1.2	95,777	.72	77,742	.77	91,445	.19	89,992	.33	118,428	.22	64,737	.22	118,428	
Birbhum ..	1.6	62,195	1.20	59,195	.31	46,637	.10	39,285	.44	72,303	.06	58,323	.44	72,303	
Bankura ..	.36	53,415	.23	54,272	.19	52,840	.06	238,723	.13	231,162	.05	238,723	.13	231,162	
Midnapur ..	1.2	145,873	1.70	271,278	.92	183,599	.71	50,507	.26	43,695	.64	61,047	.64	61,047	
Hooghly ..	1.73	47,150	.85	44,899	.71	42,133	.29	45,472	1.04	45,472	.21	52,985	.21	52,985	
Howrah ..	1.9	34,753	1.51	35,924	.30	164,434	.21	195,227	1.37	190,695	.02	74,021	1.37	9,001	
24-Parganas ..	1.3	105,185	.88	149,897	.35	38,572	.42	74,213	.09	85,792	.15	74,213	.09	85,792	
Calcutta ..	2.2	77,359	1.08	39,754	.42	91,636	.69	146,311	.17	92,658	.40	146,311	.17	92,658	
Nadia ..	.32	60,442	.45	83,948	.69	223,872	1.87	223,872	.10	211,429	.11	211,429	.10	211,429	
Murshidabad ..	2.4	103,852	2.35	112,182	.22	64,404	.11	122,989	.02	146,848	.03	146,848	.03	146,848	
Jessore ..	.27	65,153	.22	59,659	.08	68,148	.03	107,011	.02	120,738	.23	82,671	.007	66,059	
Khulna ..	.10	.10	.11	84,563	.21	85,102	.55	130,579	.33	111,598	.13	124,998	.13	124,998	
Rajshahi ..	.11	.11	.11	97,809	.93	124,230	.86	142,343	.04	148,937	.02	148,937	.02	148,937	
Dinajpur ..	.40	.40	.40	31,535	.07	44,886	.06	27,058	.20	18,360	.04	18,360	.04	18,360	
Jalpaiguri ..	.17	.17	.17	14,728	.07	14,112	.30	195,466	.28	152,455	.25	228,465	.25	228,465	
Darjeeling ..	.02	.02	.02	104,140	1.04	143,803	.83	42,740	.03	55,793	.04	56,949	.04	56,949	
Rangpur ..	.52	.52	.52	40,684	2.58	41,588	1.18	84,494	.09	75,538	.06	35,304	.06	35,304	
Bogra ..	1.5	107,116	2.42	14,844	.39	109,382	2.37	353,700	.09	155,310	.05	31,835	.05	31,835	
Pabna ..	.09	61,239	1.55	137,186	2.67	209,044	1.16	197,341	.61	150,853	.12	150,853	.12	150,853	
Malda ..	.57	147,745	.84	320,817	.68	316,350	1.33	397,791	.33	540,226	.12	499,240	.12	499,240	
Dacca ..	.21	.21	.32	86,759	.44	99,775	1.71	106,503	.95	129,572	.33	103,589	.33	103,589	
Mymensingh ..	.32	.32	.16	104,265	.07	135,215	1.10	187,809	.07	229,642	.04	186,612	.04	186,612	
Faridpur ..	.05	.05	.05	70,469	1.01	90,520	2.13	123,482	.44	92,002	.21	83,227	.21	83,227	
Bakarganj ..	.36	.36	.27	83,883	.49	110,503	.21	130,606	.07	131,366	.10	137,568	.10	137,568	
Chittagong ..	.23	.23	.23	138,946	.41	191,211	1.16	29,215	.43	398,567	.20	314,254	.20	314,254	
Noakhali ..	.7656	.7656	.27	Not under registration.	7,176	13,677	.22	13,677	.16	13,992	.02	11,209	.02	11,209	
Tippera ..	..	..	..	32,032	..	53,403	..	49,269	..	52,786	..	44,276	..	44,276
Chittagong Hill Tracts ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dispensary, Railway, Tea Garden and Factory Vaccinations.	Total ..	• 68	2,458,200	• 85	2,906,964	• 94	3,730,187	• 32	3,872,343	• 24	3,609,675	• 24	3,609,675	• 24	3,609,675

STATEMENT No. VI.

Showing the degree of protection afforded to infants in the Presidency of Bengal during the year 1930-31.

Rural and urban areas. 1	Number of births during the year. 2	Number of deaths among infants under one year. 3	Surviving population under one year available for vaccination. 4	Number successfully vaccinated. 5	Proportion of infants successfully vaccinated per mille of available infant population as shown in column 4. 6	Proportion of infants successfully vaccinated per mille of available infant population during the previous year. 7
RURAL AREAS.						
Burdwan Division.						
Burdwan ..	46,897	8,924	37,973	7,473	196·8	210·7
Birbhum ..	35,078	7,026	28,052	6,579	234·5	139·3
Bankura ..	30,752	5,703	25,049	6,699	267·4	322·6
Midnapur ..	70,265	11,593	58,672	22,416	382·0	423·1
Hooghly ..	23,454	4,191	19,263	2,888	149·9	179·9
Howrah ..	20,270	3,197	17,073	4,465	261·5	265·6
Presidency Division.						
24-Parganas ..	57,381	7,716	49,665	27,292	549·5	431·0
Nadia ..	41,811	9,979	31,832	14,128	443·7	496·5
Murshidabad ..	47,853	9,432	38,421	17,326	451·0	404·5
Jessore ..	35,830	6,759	29,071	3,452	118·7	216·6
Khulna ..	41,555	6,992	34,563	6,441	186·3	685·0
Rajshahi Division.						
Rajshahi ..	41,928	9,698	32,230	11,949	370·7	333·4
Dinajpur ..	47,768	10,444	37,324	9,929	266·0	375·0
Jalpaiguri ..	30,929	5,647	25,282	6,921	273·7	176·8
Darjeeling ..	9,591	1,606	7,985	3,254	407·4	420·7
Rangpur ..	66,288	13,911	52,377	3,999	76·3	164·7
Bogra ..	27,000	4,904	22,096	4,235	191·6	311·3
Pabna ..	33,625	6,755	26,870	7,451	277·4	279·9
Malda ..	27,916	5,405	22,511	8,294	368·4	480·5
Dacca Division.						
Dacca ..	85,673	13,836	71,837	4,960	69·04	151·1
Mymensingh ..	114,157	19,370	94,787	14,129	149·1	97·8
Faridpur ..	63,977	11,373	52,604	3,169	60·2	88·3
Bakarganj ..	79,108	12,022	67,086	2,095	31·2	34·8
Chittagong Division.						
Chittagong ..	26,922	6,931	19,991	8,262	413·3	176·4
Noakhali ..	56,560	7,546	49,014	10,222	208·5	204·2
Tippera ..	65,153	5,586	59,567	12,407	208·3	295·8
Chittagong Hill Tracts	4,608	863	3,745	420	112·1	78·7
Total of rural areas.	1,232,349	217,409	1,014,940	230,855	227·4	253·7
MUNICIPALITIES.						
Burdwan District.						
Burdwan	383	15	368	175	475·5	320·3
Kalna	116	47	69	73	1,057·9	716·3
Katwa	66	6	60	114	1,900·0	1,432·8
Dainhat	76	13	63	160	2,539·9	2,500·0
Raniganj	303	53	250	131	524·0	576·8
Asansol	405	49	356	146	410·1	366·0

Rural and urban areas.	Number of births during the year.	Number of deaths among infants under one year.	Surviving population under one year available for vaccination.	Number successfully vaccinated.	Proportion of infants successfully vaccinated per mille of available infant population as shown in column 4.	Proportion of infants successfully vaccinated per mille of available infant population during the previous year.
1	2	3	4	5	6	7
Birbhum District.						
Suri	106	16	90	7	77·7	59·8
Bankura District.						
Bankura	459	52	407	337	828·0	542·0
Vishnupur	294	72	222	141	635·1	58·1
Sonamukhi	297	79	218	173	793·6	268·2
Midnapur District.						
Midnapur	533	21	512	99	193·3	191·0
Ghatal	431	42	389	122	313·6	334·3
Kharar	85	10	75	..	..	..
Chandrakona	117	26	91	4	43·9	..
Ramjibanpur	121	20	101	49	485·2	..
Khirpai	76	8	68	..	..	66·6
Tamluk	127	9	118	30	254·2	154·3
Hooghly District.						
Hooghly-Chinsura	982	181	801	1,813	2,263·4	1,032·7
Bansberia	141	26	115	7	60·9	180·7
Arambagh	144	21	123	32	260·2	582·4
Serampur	762	65	697	749	1,074·6	720·3
Rishra-Konnagar	386	66	320	124	387·4	320·1
Uttarpura	191	14	177	15	84·7	124·9
Kotrung	143	13	130	47	361·5	240·0
Baidyabati	492	45	447	247	552·5	419·4
Bhadreswar	422	81	341	76	222·8	387·7
Champdani	427	49	378	28	74·07	20·9
Howrah District.						
Howrah	5,101	1,387	3,714	3,429	923·2	798·4
Bally	416	29	387	55	142·1	48·0
24-Parganas District.						
South Suburban	911	182	729	613	840·9	813·7
Tollyganj	530	38	492	309	628·0	721·7
Budge Budge	197	9	188	127	675·5	624·4
Baranagar	909	162	747	240	321·2	324·2
Kamarhati	420	29	391	132	337·5	401·9
Rajpur	267	24	243	37	152·2	177·2
Baruipur	99	7	92	51	554·3	634·5
Jaynagar	98	18	80	15	187·5	1,066·6
North Dum Dum	126	33	93	16	172·0	238·1
Dum Dum	26	3	23	20	869·6	..
South Dum Dum	394	47	347	110	317·0	618·1
Khardah	92	8	84	51	607·2	71·4
Barrackpur	192	19	173	66	381·5	607·7
Panihati	332	40	292	226	773·9	464·0
North Barrackpur	387	32	355	44	123·9	451·6
Titagarh	729	73	656	218	332·3	428·3
Garulia	148	19	129	75	581·4	382·7
Naihati	352	38	314	249	793·0	684·0
Halisahar	156	15	141	..	..	..
Kauchrapara	243	10	233	..	..	..
Bhatpara	1,199	108	1,091	239	219·0	433·2
Barasat	99	17	82	4	48·7	130·0
Gobardanga	41	2	39	2	51·2	19·6
Basirhat	731	110	621	324	521·8	684·9
Baduria	261	16	245	250	1,020·4	1,200·0
Taki	147	28	119	57	479·0	700·7
Calcutta	23,494	6,152	17,342	19,987	1,152·5	1,106·4

Rural and urban areas.	Number of births during the year.	Number of deaths among infants under one year.	Surviving population under one year available for vaccination.	Number successfully vaccinated.	Proportion of infants successfully vaccinated per mille of available infant population as shown in column 4.	Proportion of infants successfully vaccinated per mille of available infant population during the previous year.
1	2	3	4	5	6	7
Nadia District.						
Krishnagar ..	434	42	392	152	387·7	861·6
Nabadwip ..	283	46	237	58	244·7	103·4
Ranaghat ..	188	18	170	182	1,070·6	889·3
Birnagar ..	60	11	46	73	1,587·0	925·0
Santipur ..	535	63	472	61	129·2	164·1
Chakdaha ..	71	6	65	35	538·4	698·4
Kushtia ..	103	9	94	8	85·1	126·9
Kumarkhali ..	60	5	55	59	1,072·7	914·8
Meherpur ..	124	19	105	26	247·6	212·7
Murshidabad District.						
Berhampur ..	451	91	360	126	350·0	372·1
Murshidabad ..	180	35	145	33	227·5	99·5
Jiaganj-Azimganj ..	183	23	160	207	1,293·7	1,013·3
Kandi ..	259	33	226	165	73·0	753·3
Jangipur ..	324	22	302	61	202·0	194·6
Dhulian ..	241	20	221	173	782·7	509·4
Jessore District.						
Jessore ..	129	2	127	24	189·0	238·4
Kotchandpur ..	59	4	55	12	218·1	285·6
Maheshpur ..	57	13	44	4	90·9	255·2
Khulna District.						
Khulna ..	166	29	137	58	423·3	218·3
Satkhira ..	191	33	158	68	430·4	598·4
Debhata ..	94	10	84	46	547·6	1,037·7
Rajshahi District.						
Rajshahi ..	480	80	400	163	407·4	353·8
Nator ..	130	22	108	4	37·03	37·5
Dinajpur District.						
Dinajpur ..	83	1	82	107	1,304·9	2,190·4
Jalpaiguri District.						
Jalpaiguri ..	375	12	363	418	1,151·5	2,859·9
Darjeeling District.						
Darjeeling ..	685	92	593	369	622·3	670·8
Kurseong ..	256	33	223	223	1,000·0	1,061·7
Rangpur District.						
Rangpur ..	216	17	199	57	286·4	492·3
Gaibandha ..	134	5	129	..	..	..
Bogra District.						
Bogra ..	124	19	105	42	400·0	775·8
Sherpur ..	31	..	31	7	225·8	69·7
Pabna District.						
Pabna ..	131	11	120	298	2,483·3	1,306·1
Sirajganj ..	438	57	381	329	863·4	842·9

Rural and urban areas.	Number of births during the year.	Number of deaths among infants under one year.	Surviving population under one year available for vaccination.	Number successfully vaccinated.	Proportion of infants successfully vaccinated per mille of available infant population as shown in column 4.	Proportion of infants successfully vaccinated per mille of available infant population during the previous year.
1	2	3	4	5	6	7
Malda District.						
English Bazar ..	321	56	265	292	1,101·9	648·5
Malda ..	29	11	18	..	101·9	418·2
Nawabganj ..	412	59	353	36	..	97·1
Dacca District.						
Dacca ..	3,820	785	3,035	2,247	740·2	836·8
Narayanganj ..	1,038	250	788	216	274·1	212·7
Mymensingh District.						
Mymensingh ..	460	69	391	22	56·2	18·7
Muktagacha ..	124	5	119	13	109·2	287·0
Netrakona ..	246	34	212	64	301·9	161·3
Jamalpur ..	541	63	478	78	163·2	9·1
Sherpur ..	528	61	467	39	83·5	134·6
Kishorganj ..	208	20	188	45	239·3	287·5
Bajitpur ..	160	15	145	4	27·5	55·5
Tangail ..	230	35	195	31	155·8	111·1
Gauripur ..	41	2	39	..	..	200·0
Faridpur District.						
Faridpur ..	188	26	162	111	685·2	568·6
Madaripur ..	558	81	477	53	111·1	227·7
Rajbari ..	121	22	99	33	333·3	127·9
Bakarganj District.						
Barisal ..	440	106	334	17	50·9	75·0
Jhalakati ..	53	10	43	3	69·7	..
Nalchiti ..	28	3	25	..	..	649·9
Pirojpur ..	318	28	290	331	1,141·4	790·4
Patuakhali ..	100	10	90	1	11·1	63·4
Bhola ..	116	5	111	..	..	..
Chittagong District.						
Chittagong ..	980	161	819	123	150·2	163·8
Cox's Bazar ..	82	15	67	30	447·7	289·4
Noakhali District.						
Noakhali ..	277	33	244	14	57·3	78·4
Tippera District.						
Comilla ..	233	6	227	99	436·1	252·8
Brahmanbaria ..	757	73	684	80	116·9	111·7
Chandpur ..	175	10	165	71	430·3	639·1
Total of the Municipalities ..	66,041	12,694	53,347	39,546	741·2	692·4
Grand Total of the Presidency ..	1,298,390	230,103	1,068,287	270,401	253·1	280·4

GOVERNMENT OF BENGAL.

Local Self-Government Department.

Public Health.

CALCUTTA, THE 8TH AUGUST 1932.

RESOLUTION—No. 1698 P.H.

Minister-in-charge: The Hon'ble Mr. Bijoy Prasad Singh Roy.

Read—

The Report of the Director of Public Health, the Sanitary Board and the Chief Engineer, Public Health Department, for the year 1930.

Vital statistics.—The vital statistics per mille in the Report on Public Health for 1930 are still based on the census figures for 1921, an anachronism necessitated by the want of any reliable data for annual adjustment of the figures for population. The preliminary census returns for 1931 illustrate the margin of error in the annual vital statistics referred to in this Resolution last year. The population of Bengal, excluding the Chittagong Hill Tracts, appears in the 1931 census as 49,909,363 against 46,522,293 in the census of 1921 showing an increase of 3,387,070.

The increase in population for the same area during the same period derived from the annual returns of births and deaths is only 1,463,471. Local movements of population in and out of the province affect the figures for increased population, but cannot by any stretch be made to cover more than a small fraction of this difference between the census and registration results. Defective as the annual returns are known to have been, especially where responsibility for them has been transferred from the police to presidents of union boards, a margin of error of over 100 per cent. on the registration figures for increased population brings prominently to notice the seriousness of their defects. Reduced to an annual margin of error on births the figures are not quite so surprising as they seem at first sight, but they do mean approximately that the increase of population in 1930, as in previous years, may or may not have been at least double and in some years must have been more than double that reported by the Director of Public Health on the basis of registration returns. Or, to particularise further, the figures for 1930 (viz., births 1,237,931, deaths 1,044,256, increase of population 193,675) are in all probability vitiated by a defect of error between 10 and 20 per cent. on the reported births. This inaccuracy can only be overcome by insistent pressure on presidents of union boards and municipal authorities and rural and urban sanitary inspectors to discharge more effectively the unattractive but important routine duties of verifying birth and death returns subject to this general inaccuracy. The figures for 1930 show a decrease of 123,347 births and of 50,007

deaths on those for 1929; and it appears that apart from Calcutta the seven districts showing an excess of deaths over births in 1930 comprise a block in the centre of the province from Jessore to Dinajpur. It is noticeable that they do not include any in the Burdwan Division.

Infant mortality.—It cannot be said that on the statistics for the province as a whole there has been much improvement in infant mortality. The total number of deaths reported under one year of age decreased from 244,000 to 231,000; but the rate per thousand births rose from 179·9 to 187·3. The maternity welfare work conducted by the Health Department of the Calcutta Corporation and by a voluntary association in Dacca continues to show what can be done in urban areas by the necessary organisation with a permanent paid staff. There are movements in the same direction in one or two district headquarters towns; but for the most part maternity welfare work even in municipal areas does not go much beyond the annual baby week with its lectures and exhibitions, of which there were 180 in this year, and the local training of dais; while in the rural areas it is still more difficult to effect much practical impression. The number of dai training classes outside Calcutta and Dacca increased to 98 and of dais attending to 1,113—less than one dai given elementary training per 1,000 births in the year. But though the actual figures are still far from encouraging, the fact remains that the consciousness of the need for maternity welfare work exists and is on the increase throughout the province.

Cholera.—The statistics for cholera and small-pox continue to show parallel features. The year 1928 was a peak year for both, and the sharp decrease appearing in 1929 was continued in 1930. The deaths from cholera were 54,963 as against 81,090 in 1929, and had fallen from twice the quinquennial average in 1928 to 33 per cent. below the quinquennial average. It would be interesting to know whether the curve of the decline compared with that of earlier epidemics can be brought into any specific relation with the use of the new methods of inoculation now so readily accepted where cholera is prevalent. Dacca was the only district which did not share in the decrease of cholera. As usual the public health resources of the district boards were supplemented as occasion required by advice and assistance from the Public Health Department to cope with local epidemics. 1,184,415 cubic centimetres of anti-cholera vaccine were issued against 1,718,610 in the previous year and 1,021,541 inoculations performed against 1,566,150. 82,100 wells and 28,840 tanks were also disinfected over and above 2,982 river ghats and other sources of water. The Public Health Department also organised the provision of facilities for inoculation against cholera of pilgrims proceedings to the important festivals, such as the Kumbh Mela, the Puri Rathjatra and the Ganga Sagar Mela. The continued absence of cholera at the Ganga Sagar Mela is a conspicuous instance of what can be done for public health on these occasions by the organised co-operation of district board and Public Health Department.

Small-pox.—There were 3,150 deaths from small-pox in towns and 8,118 in rural areas against 1,003 and 19,404, respectively, in the previous year. The respective death-rates were 1·01 and .19 against .32 and .44 in 1929, showing an increase of 215·6 per cent. in towns and a decrease of 56·8 per cent. in rural areas. With the downward curve continuing small-pox was a comparatively small factor in the mortality in rural areas for 1930, but if the Director of Public Health is correct in forecasting the trend of this epidemic, the figures should soon be on the rise again. Unfortunately the figures for infant vaccination were allowed to fall off with the decrease of the epidemic—only

253 infants per 1,000 births being successfully vaccinated during the year as against 280 in the previous year. The Director of Public Health reports that nine municipalities including two with a large labour population carried out no vaccination in 1930, a failure which requires further investigation. The vaccination statistics for the province show a decrease throughout (except under the head of children between one year and six years); but this was perhaps inevitable in view of the marked decrease in small-pox and the postponement for financial reasons of projects for universal vaccination of the population in a limited period.

Malaria and Kala-azar.—In last year's Resolution attention was drawn to the fact that mortality from malaria had been more than halved since the figures for the maximum year 1921, when 737,000 deaths were ascribed to this cause. There was an almost imperceptible reaction in 1930 with 336,879 deaths against 335,414 in the previous year. While, on the other hand, the returns under the other heads of fever which must probably include a certain amount of malaria showed a slight further decrease of 338,399 against 350,273. These figures certainly tend to strengthen the impression mentioned last year that some permanent result has been achieved by the intensive campaign against malaria in the last ten years in effecting a genuine reduction of this disease, though doubtless it will have its fluctuations in the future as in the past. The figures for death from kala-azar for the last three years have been stable with a very slight upward trend, the number of deaths from this cause in 1930 was 10,914 or 94 in excess of the previous year. At the same time the number of cases treated continues to decrease (110,017 in 1930) which is to be explained perhaps as well by variations in the number of special centres as in the prevalence of the disease.

Rural health units.—The scheme for the organisation of rural health units has now reached saturation point, with 575 sanitary inspectors or assistant health officers, each in charge of an area corresponding to a thana. The cost of the scheme to Government in the year under review was Rs. 9,40,000 and it will be some time before the effect of incremental pay and expansion of activities brings the demand for grants up to the full allotment originally contemplated of Rs. 12,00,000. The working of these units has been mentioned in the Resolution on district boards, and it is sufficient for the purpose of this Resolution to mention the value of this additional force when occasion arises to mobilise all available resources under the direction of the Director of Public Health to cope with special emergencies. The district boards have, on the whole, shown great readiness to co-operate with the Director of Public Health in making the best use of rural sanitary inspectors and to accept his advice on the technical aspect of this organisation.

Educational Propaganda and Publicity.—Four hundred and eighty-six lectures on public health were delivered throughout the province by the publicity staff under the Public Health Department with or without lantern slides. The extensive health propaganda carried out by the staff resulted in the organisation by some district boards of their own propaganda departments under their respective Health Officers. It is hoped that when financial conditions improve other district boards will organise similar propaganda departments with a view to educating the rural people in public health matters.

Public health engineering.—In works of public health engineering it is the beginning and completion that counts and in this light the outstanding event of the year 1930 was the start made with the Bhatpara

Sewerage Scheme estimated to cost Rs. 22,00,000. Otherwise the most important work under construction during the year, though not formally completed till after its close, was the Asansol Water-supply Scheme—Rs. 4,50,000. Improvements in the water-supply of Dacca, Faridpur, Patuakhali and Bansberia municipalities were completed and a beginning was made with water-supply works at Chandpur, Narayan-ganj and English Bazar. Estimates were prepared in various stages for new works up to a total of Rs. 31,00,000, only a fraction of which, it is to be feared, will now materialise in sanction and expenditure. The criterion of activity afforded by actual expenditure during the year on works under construction under the supervision of the Chief Engineer does not however seem to have been provided for in the form of this officer's report and might be introduced.

Personal.—Dr. C. A. Bentley made over charge of the office of Director of Public Health during the year after a tenure of office of 15 years which has made an indelible impression on the public health record of Bengal. It would be difficult to say how much the whole spirit of public health work in this province owes to Dr. Bentley's personal impetus. He was succeeded by Dr. Khambata who has twice previously acted in this capacity: while Mr. Griffin remained in charge of the post of Chief Engineer, Public Health Department. To both these officers the Minister desires to express his appreciation of the results of the year.

By order of the Government of Bengal

(Ministry of Local Self-Government),

H. P. V. TOWNEND,

Secretary to the Government of Bengal (offg.).

Nos. 1721-1730P.H.

Copy of the Resolution [with copies of the reports] forwarded to (1) all Commissioners of Divisions for information and communication to all District Officers and all Chairmen of District Boards in their respective Divisions; (2) the Surgeon-General with the Government of Bengal, and the Inspector-General of Police, Bengal, for information; (3) Director of Public Health, Bengal, the Chief Engineer, Public Health Department, Bengal, and the Secretary to the Sanitary Board, Bengal, for information.

[] for (1) and (2) only.

By order of the Government of Bengal

(Ministry of Local Self-Government),

A. Z. KHAN,

Assistant Secretary to the Government of Bengal..

CALCUTTA,

The 12th August 1932.

